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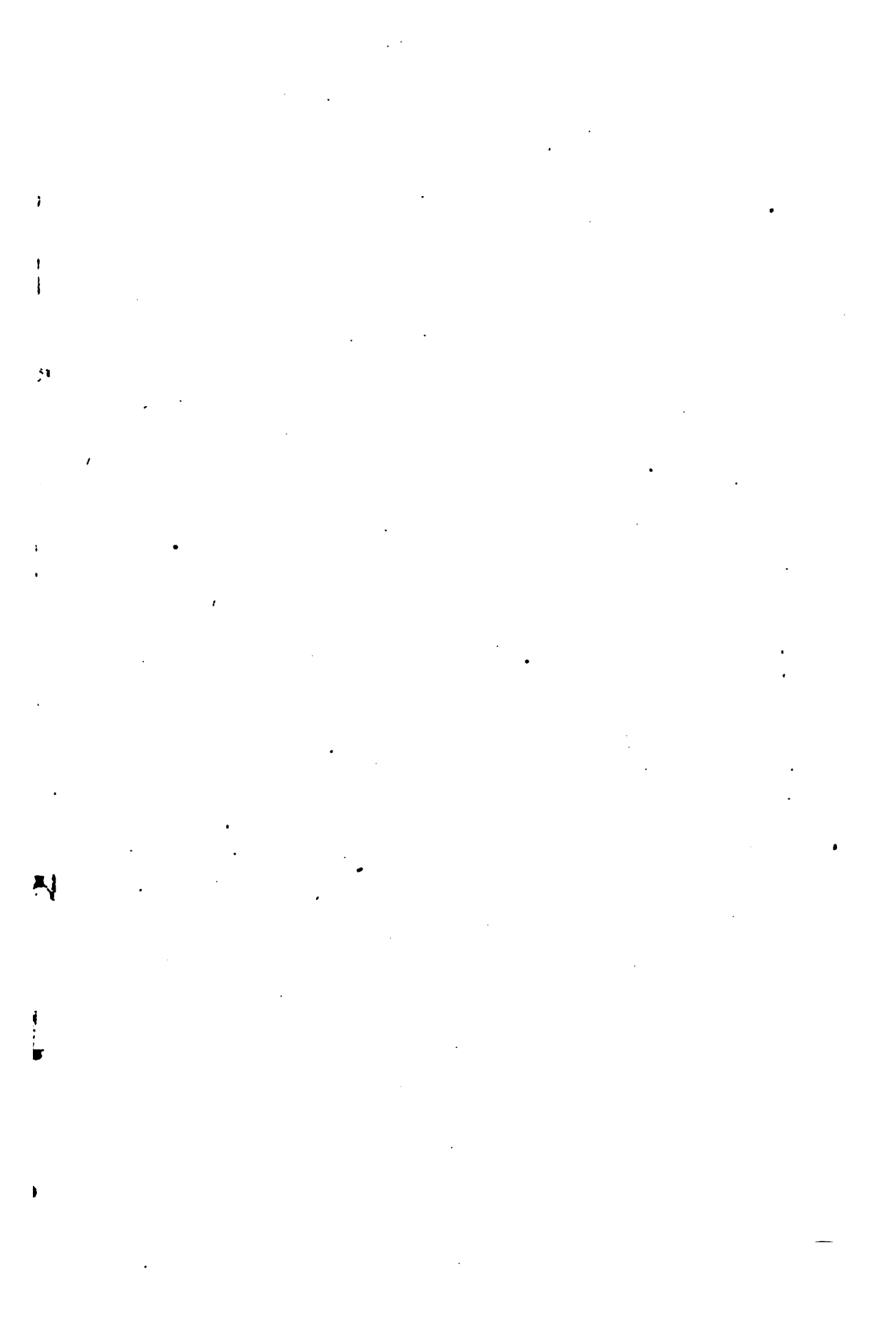
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SIMON BROWN, EDITOR.

FREDERICK HOLBROOK AND HENRY F. FRENCH, ASSOCIATE EDITORS.

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SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR JANUARY.

"Season of crackling nuts and pippins pale,
Of frosted cider and wild popping corn,
Of cheerful hearths with glowing embers piled,
Of honest labor in his blessed home.

* * * * *
O, Winter though thou bearest on thy brow
The tempest-scar and icy touch of death,
Still do I love thee, for beyond thee, Hope
A brighter world presents to reason's eye,
Where the Archangel sings his morning song—
The heavenly sky-lark at the gate of day."

American Seasons, by Jesse E. Dow.



JANUARY, with his icy hand, unfolds the portals through which we look, as it were, down the vista, and behold Winter, with its storms of snow and sleet; its snow-banks sparkling in the bright sunlight, or reflecting back the chaste glitter of the full orb'd moon; its gaiety and its gloom; its merry sleigh-rides, rushing, with silver bells, over the polished road-way; its weary and worn pedestrian, buffet-

ing the driving, drifting storm, and seeking a shelter which, perhaps, he shall never find short of another world; the happy farmer by his winter fire, surrounded by "wife, children and friends"—all these, in our mind's eye we see, with a hundred other things common to the season of *rest*, of festivity and mirth.

Yes, the season of rest—for, like night to the toil-worn man comes winter to the toil-worn earth:—faithfully has she labored from April to November—"seed time and harvest" has she given, and her abundance has been poured into the lap of man. Her night of rest has come, and in the glorious

Springtime, will she arouse herself again, and again pour forth her abundance; and so shall it ever be, for the Lord said, "While the earth remaineth, seed time and harvest, and cold and heat, and summer and winter, and day and night shall not cease."

And while the earth thus resteth, the husbandman enjoys the fruits of his summer labor. He has something to do, however, besides eating and drinking and making himself merry, for Winter has her appropriate labors as well as summer, and not by any means the least is that of *study*. In the days of long ago, when the only knowledge possessed by the Farmer was that which he had learned from his father, and when asked why he did thus and so, it was sufficient justification to him to say, because the same was done by my father and my grandfather, no study was necessary. Farming then descended very much as the "good name" so happily expressed in the song,

"The farm that I now hold * * *
Was the same that my grandfather tilled.
He, dying, bequeathed to his son a good name,
Which unsullied descended to me,
For my son I've preserved it unblemished with shame,
And it still from a blot shall be free."

It is very well—excellently well—to have a *good name* thus descend, but to have an old wooden plow-share, that it would take three yoke of oxen to haul through ordinary tillage land, two men on the beam to keep it in, and a man with a hoe to follow, and turn over the sward, descend from generation to generation, *is not quite so well!* We are of those who believe in improvement, and we believe too, that most of the astonishing improvement that has been made in farming, within the past quarter of a century, is due to the improvement in farming utensils—especially in plows, cultivators and seed-planters—and to the many agricultural journals and books, which have sprung up all over Christendom, and we are not certain but among the "rest of mankind," and enabled practical men to hold intercourse with each other, though situated miles and miles asunder. Thanks! thanks to the mechanics, for their agency in the good work.

Yes, study is one of the—we said *labors*, perhaps *recreations* would be a more proper designation—but be it what it may, no man in these days can be a “tip-top” farmer without study; and while he studies he compares. To illustrate. A farmer plants certain land with corn; the crop does not answer his expectations. He supposed he had chosen the most proper soil, and had done all that he thought necessary to insure a good crop. What was the trouble? That there was a “screw loose somewhere” which had let the bottom out of that crop he was certain, but where, and how to find it is the question. The winter evenings come on, he says to himself, “now I will make a thorough examination of the *New England Farmer*, and my books, and see if I cannot ascertain what was the reason I did not get a better crop of corn off that ten-acre lot, that I took so much pains with last season.”

So he proceeds to examine; he finds that certain kinds of manure are peculiarly adapted to certain formations of soil, while the same manures used on other formations, have little or no effect. “And this,” says he, “is my error. I have not applied the proper manure to that particular soil; next summer I shall know better,” and then profiting by his examination of the subject, he obtains one of the best crops in the vicinity.

We believe the prejudice which existed some years since against “book-farming” has nearly died away, and farmers have now learned that a man can no more be an excellent husbandman without the study of books, than he can be a Clergyman, Lawyer or Doctor.

We recently spent a few days at the house of a friend who glories in being a tiller of the soil. His barn was well filled with hay and grain—underneath was a large root-cellar, clean, ventilated, and lighted, and still another, new and warm, where his fat porkers were enjoying all the luxuries of hogdom, among the fallen leaves, used-up horse-bedding, decayed weeds, &c., &c.; his house cellar was amply stored with as fine a lot of potatoes, apples, turnips, and other of the products of his land, as we have seen for many a day. Abundance was all around him; he had been successful even beyond his expectations,—and his farming was chiefly learned from books. We desired to write a letter, and so said to our friend. “There,” said he, pointing into a room which many would dignify with the name of library, “is where I do both my writing and my studying; it is at your service.” And there we found a comfortable writing-desk, with all the materials for writing, in the most perfect order, and directly over the desk a large book-case, holding, say, from one to two hundred volumes of the best books on farming that could be procured. There was no mystery in our mind why our friend was a successful farmer. Those books told the story.

Although winter is the time for the farmer to stu-

dy, it is also the time for him to make preparation for the coming Spring. If the handle of a plow happens to be broken, do not wait till the day comes for using it, before either mending it yourself or employing some other person to mend it for you. Winter is a capital time to repair broken tools, and no one can better appreciate the old adage that a “stitch in time saves nine,” than the farmer.

We never shall forget the *tantrum* into which a farmer of our acquaintance once got, just for the want of a simple iron ring. He had a few tons of as good herds grass as any one would desire to see, just ready to go in, when the western heavens began to be obscured with the blackest kind of coming shower. All was hurry and bustle, of course, the oxen were yoked and attached to the hay-cart in double quick time, the men and boys were all on the *qui vive*, the rakes and forks were thrown on, and away all went upon the run, about half a mile, to the hay field. One large fork with which to pitch on the hay, was taken along, and none other at all suitable for that purpose. Tom was on the cart to lay the load, the stout hired man was to pitch on, and the farmer and one or two boys were to rake after. Two or three cocks were pitched on, and the prospect was fair that at least one large load would be got home dry, when lo, crack went the end of the fork handle, just as its holder was about heaving up a large forkfull, and while the handle went up with a jerk, the shining iron was left in the hay! The handle was split up about a foot,—and there stood our friend, looking the very picture of despair, while he exclaimed, “There now, didn’t I tell you to go and get a ring put on to that fork handle before it was used again—didn’t I, and why upon earth didn’t you do it? And now, here we are, and every spear of this hay will be just as wet as muck before we can get another fork.” We all did the best we could—but our main stay was gone—and the consequence was that up came the shower before the load was half on, and hay, men, cattle, and all concerned were drenched by one of the worst pouring showers it was ever our lot to be out in.

If that farmer, instead of trusting to Tom, Dick and Harry, to have that ring put on, had done it himself, he might have saved his hay dry, and we might all have escaped a soaking that, if it did not make any of us sick, might have done so, and entailed a physician’s bill sufficient to purchase all the forks in a good-sized agricultural warehouse!

This, then, is one of the months in which to see that every pitch-fork has a ring on it to prevent it from splitting—every rake has all its teeth in—every hoe is well fastened to its handle, &c., &c.

Besides study and work, the farmer will find ample time to be merry, and to enjoy his winter holiday, and we wish *him*—we use the words as applicable to all our readers—A Happy New Year.

Our Initial Letter for January is indicative of an important item of business for the month. After an abundance of genuine, heart-felt good nature in the family, perhaps there is no one thing which adds more to its comfort than a plentiful supply of good fuel, well prepared, and conveniently housed. It sorely tasks the temper of the mother and daughters to be obliged to coax and puff and blow either wet or green wood into a generous flame, when the morning is biting cold, and the children are to be made ready for school, or the men to take an early start for the woods or the market.

It is a matter of economy, too, to burn dry wood. Now is the favorable time to set this matter all right.

CARE OF STOCK.—Constant and kind care of stock is something like frequent hoeing to a corn crop. The hoeing keeps the soil light, and susceptible of receiving valuable influences from the atmosphere, and thus saves manure. So frequent carding, and careful watering and feeding, saves hay and roots and grain, and gives you a larger product of milk and flesh than could be obtained on even a larger amount of feed, without the extra care. It is well to remember, too, that shelter and warmth supply the place of food, in some degree.

SHEEP.—Feed them on clover hay, if convenient, and make it convenient for them to go under cover at will.

CALVES.—Examine your cattle—but especially your last spring calves—and see if vermin have attacked them. If so, a little warm lard or oil rubbed close to the skin about the roots of the tail, the head and neck, will soon destroy them. Cattle cannot thrive while feeding a little army of depredators.

SNOW.—Bank the house well with snow and the wood-pile will last longer.

JANUARY—the Month of good wishes, new plans and new hopes—let us all start right in it, in every particular; the resolution of all so to do, may be wonderfully strengthened by a careful perusal of the Life of the late AMOS LAWRENCE.

SURFACE OF THE MOON.—The Earl of Rosse, who has recently completed the largest telescope ever made, alluded, at a late meeting in London to its effects. He said that, with respect to the moon, every object on its surface of 100 feet in height was now distinctly to be seen; and he had no doubt that, under very favorable circumstances, it would be so with objects 60 feet in height. On its surface were craters of extinct volcanoes, rocks and masses of stones almost innumerable. He had no doubt that if such a building as he was then in were upon the surface of the moon, it would be rendered distinctly visible by these instruments. But there were no signs of habitations such as ours—no vestiges of architecture remain to show that the moon is, or ever was inhabited by a race of mortals similar to ourselves. It presented no appearance which

could lead to the supposition that it contained anything like the green fields and lovely verdure of this beautiful world of ours. There was no water visible—not a sea or a river, or even the measure of a reservoir for supplying town or factory—seemed desolate.

WIND AND RAIN.

Rattle the windows, winds!
Rain, drip on the pane!
There are tears and sighs in our hearts and eyes
For the life we live in vain!

The gray sea heaves and heaves,
On the dreary flats of sand;
And the blasted limb of the church-yard tree
Shakes like a ghostly hand!

The dead are engulfed beneath it,
Sunk in the grassy waves;
But we have more dead in our hearts to-day
Than the earth in all her graves!

Putnam's Magazine.

WATERBURY WILLOW ESTABLISHMENT.

Feeling a deep interest in the partial experiments now in progress for the introduction of the basket willow into this State, we recently paid a visit to the willow plantation of Mr. Erastus Parker, of Waterbury; and we confess our gratification of witnessing, not only the remarkable beauty of his growing crop, but the completeness of his triumph in demonstrating the practicability of adding this profitable crop to our other Vermont products.

Mr. Parker's plantation consists, at present, of about four acres, located on the banks of a small mill-stream. About one-eighth of this was planted two years ago last spring, and is now burdened with its third crop, which stands, on an average, perhaps six and a half feet high, and will yield at the rate of three tons per acre. Two acres were planted one year ago, the willows being about five feet high, and yielding a ton and a half per acre. And the remaining nearly two acres were planted last spring, the willows only reaching the height of three or four feet, and not being generally used for any other purpose but for cuttings for planting, with which Mr. Parker proposes, at a moderate price, to furnish all who are desirous of going into the culture.

The lowest market price of the willow is now \$130 per ton, and the whole cost of cultivation, gathering and preparing for market, does not exceed \$30 per ton, and with the aid of Mr. Colby's successfully operating peeling machine, this can be done for much less. Indeed, we have become satisfied that an acre of willows, at least, after the first planting, can be produced with very nearly the expense of an acre of corn; while the profit, after the second year, as can be readily calculated by the above statement of what Mr. Parker has actually accomplished, will be ten fold greater than one could reasonably expect from one of the ordinary products.

The success, then, of the experiment for cultivating the basket willow in Vermont must be considered settled; and our farmers have only to avail themselves of the example now before them to realize profits of which before they had no conception. Much information, however, is needed before the business can be entered on understandingly.

Green Mountain Freeman.

For the New England Farmer.

TRANSPLANTING APPLE TREES.

THEIR MANAGEMENT AND PROFITS.

MR. EDITOR:—Knowing that you will accept communications for insertion in your paper that will be of interest to the farming community, I thought I would write and make a few suggestions under the above heading, from a little experience I have had in the business.

In the first place, all those who have it in contemplation to plant trees for an orchard, should select a good location, which should be land of a gravelly loam, sloping to the south as near as can be, and if a little stony so much the better. Dig your holes for the reception of the trees, at least twice as large as will be occupied by its roots; a rod from the fence and a rod and a half to two rods apart each way in straight lines, according to the dimensions of the field. The trees to be planted should be of good size, two years from the bud, with handsome, straight trunks, and the limbs branching out four or five feet from the ground. It would be well to procure the best, as in the end they are the cheapest. With the help of an assistant to hold the tree in a perpendicular position, proceed to place the roots in a straight line from the tree; then put some fine mould underneath and around the small roots and fibres, leaving no place not filled up as it should be; and pressing the dirt gently down with the foot. See that the trees are set in straight lines both ways, so as to show some taste, as well as for profit; for there is something pleasing to the eye of a person passing by, to see them coming into line in several directions. After a person has set his trees he should take especial pains not to have them injured in any way whatever, when working his cattle among them, by breaking the limbs, jamming off the bark and disturbing the roots.

Having been to some labor and expense of purchasing the best trees and planting them, he should keep an eye on the best course to be pursued as regards their management. Now what is to be done to insure success? Why simply the observance of a few rules that must be strictly adhered to. First, the ground among the trees should be kept in cultivation every year with some kind of hoed crop; and be liberal in the application of some good manure, spread on and well worked in with the plow and harrow. The trees should be washed every year with strong soap-suds to keep the bark smooth and healthy and free from moss. I would here caution people against a wash for trees that I once used, which was from a recommendation I saw in some book or paper, and that was a pound of potash to two gallons of water. After I had washed about a dozen trees it had eaten through the skin of my fingers, and so I reduced it with more water. It also turned the bark of the trees white, which can be seen to this day.

Now as to the best time of the year to trim trees, there are as many minds as can be imagined. Some think the winter is the best, because they have more time to attend to it. That should not be any reason why we should take such a time for the work, as the bark gets discolored below the wounds occasioned by the removal of limbs, and induces decay. The time in my opinion to trim trees, is in the month of June, when the wounds will speedily heal, and be the least detrimental to the tree.

Every one having young trees, should have a good pruning-knife and saw, so that when the proper time comes, he may give the tree its right shape and form, removing all limbs that may cross and chafe each other, giving it the form of an inverted umbrella as near as can be.

When any one has planted an orchard, he should not get discouraged, but work with a will, and keep the ground in good tilth among the trees, as it is in the kitchen garden. He should not be satisfied with a few inches growth made in a year, but as far as lies in his power, make a growth of from one to two feet; and he will have the satisfaction in being rewarded for his labor at a day not far distant. No man can give too much of his time, or bestow too much care upon his trees. It is the great secret in bringing them to perfection. What satisfaction and delight it must be to the owner of an orchard in full bearing, to see his trees, reared by his own hands, bending under their loads of fruit, rewarding him for his toil and labor, in profit and pleasure!

In regard to the profits of raising fruit, it must be admitted I think, that it is more profitable than anything else a farmer can raise. The crops raised among the trees while they are growing, will more than pay the expenses of their culture; and after they have come into bearing, nothing need be done but to keep the ground plowed every year. The prices that good apples usually sell at, will keep in ratio with the population at least for the next half century.

J. UNDERWOOD.

Lexington, Nov., 1855.

REMARKS.—MR. UNDERWOOD is a good farmer, and understands the business he is discussing. If we mistake not he has taken some of the first premiums for orcharding in Middlesex County. Will he be kind enough to give us his reasons, why land "sloping to the south," is better than any other as a location for an orchard? The reader will not fail to observe the effect of a wash of potash water, even of the reduced quality of a pound to two gallons of water.

THE SENSE OF SIGHT IN BIRDS.

We copy the following interesting chapter, perhaps from the pen of Prof. De Vere, from *Pulnam's Monthly* for November:

Audubon has written an amusing book, I had almost said of fables, called *Ornithological Biography*. By a number of cruel experiments, he has proved to his own entire satisfaction, and that of many others, that vultures are led to their food by the sense of sight alone; the sense of smell, which they were supposed to possess in an exquisite degree, affording them not the slightest assistance. His experiments prove quite too much for his purpose, for they equally deprive the poor birds in question of both sight and smell. It is certain that this bird possesses both senses in great perfection, and equally certain that neither nor both are the sole means it employs for obtaining its food. Though the senses in animals are the means of obtaining them food, they are not the sole means, as we very well know.

It is a most curious question, and well worth

more attention than it has ever yet received. For want of a better explanation, we usually say there is an instinct that enables animals to find their food. Many go from great distances directly to it.

In disputing about the comparative value of the senses of sight and smell in birds, authors notice a much more curious fact,—the great power birds possess of altering the focal length of their eyes. To see equally well an object at a distance of many miles, and a minute seed or insect an inch from the bill, may well amaze us. Observe the first person of your acquaintance you meet, who happens to wear spectacles. If he looks at an object near him, he looks *through* his glasses; if at a more distant one, *over* them. Go to a practical optician and desire him to construct an instrument that will enable you to do what birds are constantly doing in this, and he will, most likely, tell you the thing is impossible.

Man probably surpasses birds in extent of vision, as much as birds surpass man in sharpness. Ross, in his voyage to Baffin's Bay, proved that a man, under favorable circumstances, could see over the surface of the sea, 150 miles. It is not probable that any animal can equal this for extent. In sharpness of sight, on the other hand, birds greatly excel us. The eagle, soaring at such a height that he seems a mere speck, sees the grouse walking in the heather, which it so closely resembles in color as readily to escape the sportsman's eye. Schmidt threw to a considerable distance from a thrush a number of beetles, of a pale grey color, which the unassisted human eye failed to detect, yet the bird observed them immediately. Many birds readily perceive insects on branches where the sharpest sighted person can detect nothing.

The eyes of birds are remarkable for their great comparative size, the great convexity of the cornea, and for having the sclerotic coat formed anteriorly to a circle of bony plates. The optic nerves are very large, and unite so intimately as to appear perfectly incorporated. The iris is exceedingly contractile—as all may have observed who have watched a bird dying. Birds do not expire with eyes open, as is the case with man and the lower animals, and when they are expiring, you may readily observe the great power they possess of dilating and contracting the pupil. The muscles, as in man, are six in number—four straight and two oblique. In many birds the eye-ball possesses very little mobility, and in some of the owls it is so closely fitted into the orbit as to be immovable.

How the eye adapts itself to near and distant objects is one of the most abstruse questions in physiology. Three explanations have been offered. 1. By bringing forward the crystalline lens nearer to the cornea, without altering the form of the whole eye or the crystalline itself. 2. By changing the figure of the globe of the eye, so as to increase the distance between the cornea and retina, as you pull out the joints of a common spy-glass; and, 3. Without altering the general form of the eye, by increasing the sphericity of the crystalline, and thus increasing its refractive power. The first was the opinion of Haller and the earlier physiologists. The second, was adopted by Blumenbach and many able men. The third was the opinion of Lewenhoeck, Descartes, and Dr. Young, and is, perhaps, the true explanation. Sir Everard Home and Mr. Ramsden performed many experiments to elucidate the question, but they proved nothing.

GEORGIC ABOUT TREES.

Extract from a "Georgic about Trees," read before the Young Men's Association at Elmira, N. Y., by Prof. EDWARD NORTH, of Hamilton College:

Trees furnish us with timber, fuel, fruit;
Yet not for this alone, I bless their sult.
They have their language, sympathies and voice;
With hearts that leap for joy they can rejoice,
And mourn with mourning hearts; if happy thought,
Or hope, or love returned, or good deeds wrought
With softest sunshine fill your soul and eye,
To all this sunshine woods give glad reply.
These joys, for which tongue hath no utterance,
Are voiced in music by the streamlet's dance;
Feeling that struggle at your lip for words,
From smiling trees are syllabled by birds;
Or should bereavement, pain, ingratitude,
People your breast with sorrow's sullen brood
Of wretched thoughts, and human accents rasp
Your wounded spirit, and the proffered grasp
Of friendship's hand seems icy cold and hard,—
With no such rudeness will your peace be marred,
When to the hushed and twilight grove you wend,
For friendship's self without the selfish friend.
From whispering leaves, and insect's hum, and grass
Fragrant beneath your footsteps there shall pass
Such soothing influence to your breast, that ere
Your griefs are told they turn to holiest cheer.

For the New England Farmer.

HONEY PONDS.

THE DAY OF HUMBBUG STILL CONTINUES.

MR. EDITOR:—Not long since, seeing an advertisement in the *Traveller*, to the effect, that if any person would address a letter to Messrs. H. T. J. & Co., New York, box so-and-so, inclosing four postage stamps, by return of mail, Messrs. & Co. would inform the person, of a way by which they could make five or ten dollars per day, with scarcely any trouble, and without leaving home, &c., &c. To me the advertisement contained upon the very face of it all the elements of a perfect humbug. However, a young friend of mine, being out of health and wishing to find some method to occupy his mind, and if possible replenish his pocket, followed the directions of the advertisement; and, my dear editor, what was the result, think ye? You begin to laugh, I know you do; well, here it is, for the especial benefit of all young men out of health, and the would-be-humbugged public in particular. A circular was returned, in which the young man was informed that if he would again address Messrs. H. T. J., & Co., inclosing five dollars, they would inform him of a method to make *honey*!! as good, if not better, than any bee in the United States or anywhere else could do; indeed, bees could be dispensed with altogether, and their manufactory was attended with considerable trouble, and the bees themselves a nuisance about one's premises. A short extract from the circular:—

"One hundred and fifty per cent. can be made upon the sale of the articles, and that, too, when sold at a less cost than the honey made by bees. It can be made in small quantities for 6 cts. per lb. Upon the receipt of 25 cts., I will send you a small pot containing a sample of the honey made from this recipe, &c., &c. A man can make one hundred pounds in twenty minutes, with but very little trouble. The honey, as manufactured by the new process, has, also, the great advantage of being always fresh and in season—a thing utterly impossi-

ble in the material made by bees—and will keep for years." Indeed! honey by this new process, I presume, can be made to flow freely in streams to suit all over the land, and "the rest of mankind," for little or nothing. Every man who feels a partlice of philanthropy welling up in his bosom, can have a small or large—as to that matter—pond of it near his premises for the use of his household and the "stranger within his gates," to dip out of and satisfy his hunger, or his taste for *honey*, "manufactured by the new process," superior to that of the industrious and humble little bee. Verily the day of humbug is not yet, and what comes next—echo answers next. That a "fool and his money is soon parted" is as true now as in the day of the wise man.

King Oak Hill, Nov., 1855.

TITYUS.

CRANBERRY CULTURE.

Many a sensible housewife has adopted the very sensible opinion that *preserves* made sufficiently rich to keep throughout the year, are but poorly adapted to *preserve* the health of those who swallow them. Cranberries, on the other hand, are fast gaining in public favor, as an article easily kept in its natural state, quickly done up for an occasion, and affording an agreeable acid, not *injurious* but *beneficial to health*. Hence, the increasing demand for them; and hence the probability that the price will not fall in proportion, as the supply increases, but that the consumption will keep pace with the supply, and remunerating prices be maintained; and hence also, a reason for copying the following from the able report of CHARLES L. FLINT, Esq., Secretary of the Mass. State Board of Agriculture.—*Nash's Farmer*.

"The cranberry may be propagated from the seed, or from cutting, or by transplanting. The first crop obtained from planting the seed will, ordinarily, be a year or two later than that produced by wild plants transplanted. It is, therefore, found to be more profitable to transplant, except in one or two sections of the State, where the interest in transplanting has been so great that \$10 a square rod is not an uncommon price for plants, where the ground is thickly covered.

Where it is desired to propagate by slips, or cuttings, the usual practice is to gather a large quantity of vines, and run them through a common hay-cutter, until they are reduced to the length desired—an inch or so—when they may be sown broadcast, and harrowed in; though it is considered best, on some accounts, to sow in drills, and cover properly. These slips very soon take root, starting from the base of the leaves, and shooting up many rising branches.

In case of cranberries growing wild, it is a common and well known practice to flow or cover them with water, during the winter and early spring. This is very desirable, if the situation is such as to allow it, though it is not generally considered essential by those who have been most successful. It is often useful where there are facilities for flowing, to let the water remain a few inches deep till the spring is well advanced, (some think till the first of May, or even later,) to retard the blossoming till there is no danger from frosts. Facilities for flowing are desirable in the *cultivation* of cranberries also; and if the plantation could be so arranged as to flow very quickly, it might be of essential service, occasionally, during the spring and autumn.

As the cranberry, in its natural state, is more frequently found growing in a low, wet swamp or marsh, that kind of land is generally selected for its cultivation. The mode of setting out the cranberry in such a swamp, if we suppose it to be covered with bushes and grass and surrounded by a sandy soil, or in the immediate neighborhood of sand, would be as follows: first, cut the bushes and pare off the surface turf to the depth of three or four inches, so as to remove as far as possible, the roots of grasses and bushes; then level the whole, by filling in sand to the depth of from two to four or five inches, according to circumstances. It is desirable that the surface of the sand should be raised but slightly above the level of the water of the swamp, meadow, or pond filled up, so that, by digging into the sand with the hand or hoe, the water may be found within two or three inches of the surface.

The plants should be taken up with the spade, square turfs of the thickness of two or three inches, this being the depth to which the roots generally descend. When the ground has been leveled and prepared as directed above, it will be convenient to draw straight lines and set the roots about eighteen inches apart one way, and one foot the other, in small clusters of about five or six together, the grasses taken up with them in the turf having first been removed from them. The practice of some has been to set the turf, thus taken up, into the row without removing the grass; but the vines are so tenacious of life that there is little danger of their dying, even if all their natural earth is removed from their roots, and those who have followed this method, have generally less trouble in the subsequent cultivation.

Some prefer to set them in rows at a greater distance apart, having the rows two and a half or three feet, and the plants one foot in the rows. If the sand is thick and loose, so as to make it impracticable to cultivate the vines and pull up the weeds and grasses, on account of the danger of starting the roots, the closer the plants are set the better, since they will thus the sooner cover the ground and get the advantage of the grasses. Where it is intended to hoe the plants in such situations, a foot each way will probably be the most convenient distance between the plants.

There has been some difference of opinion as to the use of peat or sand after the incipient grubbing and paring has been done; but the weight of opinion seems to be in favor of the sand, not because the cranberry will not grow equally as well in peat, but because the grasses growing so abundantly in peat, increase the labor of cultivation. A somewhat similar mode of procedure is sometimes adopted in the case of ordinary low meadows or swamps. If the meadow is covered with bushes, tussocks, remove the former with the grubber, cut the tussocks off level with the surface, when the vines, being taken from another part of the meadow or elsewhere, are set by first striking the hoe into the soil and raising it slightly, when the roots are inserted and pressed down with the foot.

Mr. Thomas H. Samson, of Plymouth, Mass., removed the whortle bushes and alders, tussocks and tops of the soil, and early in the spring set about one-fourth with cranberry vines without any dressing. He continued annually for three years to set the same quantity, a part of which he covered with a dressing of gravel and soil about an inch in thickness, and a part with sand and gravel, and

sowed over the lot a bushel of cranberries, first crushing them and mixing with sand. He finds no beneficial effect from the sand—finds his cranberries do best where the peat or mud is deepest. He sowed his cranberries from October to April. His products were at the rate of 250 bushels per acre. Has no faith in raising cranberries on dry soil.

Other experiments, however, show the practicality of raising cranberries on upland. Mr. Roberts' experiment embraced a tract near the foot of a slope descending in a westerly direction. The ground was plowed eight inches deep, and harrowed; light furrows, three and a half feet apart, were run lengthwise, and the sods were cut from the swamp, carted on the upland, and placed three feet apart in the rows, (though two would have been better,) then carefully hoed and kept free from weeds for two years. No water was supplied except that received from occasional rains.

In the cultivation of cranberries, whether on upland or lowland, it is very important that the ground should be entirely covered by the vines as soon after planting as possible, not only on account of the great saving of labor, by thus preventing the growth of grass and weeds, but also because very little fruit is commonly produced until the vines have thus spread over the surface. At the end of three years, the whole ground should be covered; but in the instances of upland culture referred to, it was not so, though the plantation had been set there, at least three or four years. Probably, if the roots had been but twelve or eighteen inches apart, the result would have been different in this respect. As it was, however, the yield in 1852 was one bushel to the square rod, or one hundred and sixty bushels to the acre, when cranberries were selling readily at \$4 per bushel.

For the New England Farmer.

ROOT CROPS.

MR. EDITOR:—As much has been said of late to encourage farmers to raise root crops for cattle, I was induced to plant a small piece of ground to carrots the past season. The land on which they grew had been plowed three years, producing the last two years, crops of potatoes; the year previous of corn.

It was of a hard and strong nature, manured at the rate of twenty-five ox-cart loads to the acre, spread and plowed in. The carrots were sown on the 24th and 25th of April, in drills of about twenty inches apart. They came up very uneven, so much so, that I planted the empty spaces with beets and turnips. On the piece of land nine rods in length, by twelve in width, I harvested thirty-two bushels full of carrots, five of turnips, two of beets, and one of parsnips. This is at the rate of four hundred and seventy-four bushels to the acre, a small yield compared to some; but had the carrots occupied all the ground sown, at a proper distance apart, the yield would have been much larger, perhaps double, as they grew to a very large size, some weighing upwards of four lbs. each. Even at this yield, which is, perhaps, nothing more than an average, I consider the carrot crop, taking into consideration the land sown, trouble and expense, more profitable to me the present season than either the crops of corn or potatoes that grew adjoining in the same field, whether designed for home consumption, or to sell at market prices. F. E. HOWARD.

West Bridgewater, November, 1855.

For the New England Farmer.

SEVERAL EXCELLENT PEARS.

The Washington Pear is a fruit not extensively known, but I have seen persons who have tasted it the past season who consider it of rather more agreeable flavor than the Bartlett, which is no mean commendation. It is a native of Delaware, of medium size, turbinate, rather full in the neck, of beautiful yellow ground, with a blush, thin skinned, tender, juicy and delicious. In season a little later than the Bartlett. The tree is an upright, handsome grower, and bears early, and the fruit is uniformly fair. If this pear were somewhat larger, it would rival the Bartlett as a market fruit.

The Heathcot is a beautiful native fruit, and I think bears an affinity to the St. Michael. Medium size, stout, pale yellow, of very tender skin and flesh, juicy, with rather more of the champagne flavor than the St. Michael. Ripe last of September, and ranks among the best, though not much known. Cole says, "thrifty, hardy, but moderate bearer."

The Andrews Pear is a peculiarly delicious fruit, and although not so sweet as the Seckle, I prefer it to that, for its singular and beautiful aroma. It is rather later than the Bartlett, and is of increased value on this account. It is a native fruit, and so generally disseminated that a formal description of it is hardly necessary. Not so handsome as some pears, being a pale yellowish green when fully ripe, yet its tenderness and freshness, juiciness and good size, give it a very high rank. Several persons to whom I had presented the Washington, Bartlett and Flemish Beauty, pronounced the flavor superior to them all. Good grower and bearer, but requires high culture.

The Flemish Beauty is so well known, that hardly any thing can be said of it except to praise. Its flavor is not always first rate, but its great size, early and heavy bearing will ever make it a great favorite. A twig of this fruit was lately exhibited at the annual show of the Massachusetts Horticultural Society, but about eighteen inches in length, having thirteen enormous pears upon it!

The Louise Bon de Jersey is another pear of standard excellence, and possesses some admirable traits which the Flemish Beauty and many other excellent pears do not. One of these traits is its increase in sweetness and goodness up to the stage of decay—never being over ripe—a quality equalled only perhaps by the Dix.

Among the many pears of the nurserymen, but few stand out prominently in the Boston market. These are the old Jargonelle, the Bartlett, the Seckle, the Bon de Jersey, the Flemish Beauty, the Beurre Diel, the Andrews and the Duchesse d'Angouleme. Some of these varieties sell from fifty cents to two dollars per dozen, and the price does not seem to come down with the increased supply. Some persons have a passion for raising nice pears, while others have an equal passion for paying a good price for them. As yet, the Bartlett seems to be the most popular.

If the price of pears should keep up, a question would present itself to the serious consideration of the extensive and prudent farmer, who has heretofore cultivated only winter apples, whether the planting of pear orchards—of dwarfs and standards—would not be a more profitable stroke of husbandry than the planting of apple orchards?

If we had as many good varieties of late pears as we have of winter apples, and if they were as easy to raise and send to market in bulk or barrels, no reasonable farmer would hesitate. But we have not, and circumstances alter cases. If good winter pears is not an anomaly—or something akin to the unnatural—why have we not more of them? The Lawrence, the Beurre de Aremberg, the Glout Morceau, Easter Beurre, and some few others, are said to keep well, but we find them ripe in the middle of November, and I am inclined to think only a very few of them could be kept in flavor till mid-winter. However, if the regular farmer were obliged to send his fall pears to market as they ripened, with present prices, he would probably find it more profitable than apple culture. As it is now, the nurserymen and amateurs supply the market, with but few exceptions.

West Medford, Nov. 16, 1855. D. W. L.

For the New England Farmer.

ON DRAINING.

MR. EDITOR:—A word on the subject of draining. It is my opinion that farmers have not yet given this important subject sufficient consideration. My neighbor Jones had several acres of low wet land that produced only wild grass, which was used for bedding or litter; he was fearful if he should cultivate it, the soil would all wash away in freshets. Well, I bought a part of it, and dug or trenched it from two to three feet deep, (as deep as the muck was,) then dug a wide ditch, 5 feet wide, on one side, for the brook to carry off the usual water, and deep enough to drain the land below the mud. On the other side, where there were powerful springs, I excavated a fish-pond about 50 feet long and 40 feet wide, and about two feet below the bottom of the muck, and a channel or drain from that to the larger brook, of sufficient depth to keep the pond dry if I chose, and made a flume at the outlet of the pond so as to retain the water if I chose, or drain it in wet weather. My pond was soon filled with pure spring water, in which I put gold-fish, perch, trout and brims about one hundred and fifty, all of which are doing well.

My land was as dry as any land in the place, and produced more than three times as much corn, potatoes, squashes, tomatoes, and melons than my old land: it is perfectly mellow, and free from baking, and dry enough to raise any kind of early vegetables. And this where cattle could not go without getting mired before the meadow was drained. I get two crops a year from this renovated land without trouble, as it is so much more pliable to cultivate than old land, and free from weeds. I would not give an acre of it for four acres of old high land to raise vegetables or grass.

Farmer Jones retained about three-quarters of an acre above mine which he drained into my pond, and into our deep brook, and filled his drain with small stones and covered them over deep enough to cultivate over, and his worthless bog at once became good land to cultivate, and after plowing it several times, he raised in 1853 a good crop of celery, and in 1854 he raised potatoes enough to bring him \$200, and after digging his potatoes in August, he sowed turnips which brought him at least one hundred dollars, and all of this where the hay crop was not worth two dollars a year before draining.

Now if draining will produce such crops, we are well paid for our labor. Farmer Jones has tried other bogs with equal success; he is now draining his upland with blind drains to prevent it from drying up and cracking, which he finds is of great use, especially in places where water stood late in the spring—in fact most of our land would be better if drained.

Yours, S. A. SHURTLEFF.

Spring Grove, 1855.

For the New England Farmer.

GREEN CORN FODDER.

MR. EDITOR:—Sir,—I have read the article of your correspondent on green corn fodder in your paper of this date (Vol. X, No. 46) with much satisfaction;—because it carries upon the face of it the evidence of an inquiring mind. Whether the writer was prompted to write, by any thing I have said on the same subject, in two former communications, about the time green corn was in condition to be cut, I am not advised;—but this is certain, he has hit upon the right plan of determining, whether or not it is worth cultivating for this purpose. It is undoubtedly true, as he says, that “the rest of mankind” generally considered it of great value, and that some good farmers go so far as to say, that they should not know how to get along without it. This I have heard distinctly said this present season, by the man who brings the butter weekly used upon my table—and by his wife also, who understands dairy management better than any man among us, and has earned more premiums for first-rate butter than any lady within my knowledge. But still, I agree with your correspondent, that the question of the *intrinsic value of green corn fodder* is not yet settled, and that it is a fair subject for continued experiments;—and as I have before suggested, of specific premiums to be awarded by our Agricultural Societies.

AGRICOLA.

Nov. 17, 1855.

TO MEASURE AN ACRE OF GROUND.—In measuring land, 30½ square yards make one square rod, and 40 square rods make one square rood, four of which, or 160 rods, make one acre. It is evident, therefore, that 40 rods long by 4 rods wide will make an acre. The same result may be arrived at by measuring 229 feet in length and 198 feet in width, or by measuring 73½ yards in length, by 66 yards in breadth. To lay out an acre square, 209 feet on each side is the nearest foot that will make an acre, being less than an inch each way over the exact distance. 43,560 superficial feet, or 208 95-100 feet on each side, constitutes an acre of ground.

☞ The annual meeting of the Hillsborough County Agricultural and Mechanical Society was held at Nashua on the evening of Oct. 2d, and continued by adjournment to the next evening.

The following named gentlemen were chosen officers of the Society for the year ensuing:

President—JOHN M. TYLER, Pelham.

Vice Presidents—Hiram Munroe, Hillsborough; Isaac Kimball, Temple; Samuel Little, Hollis; P. M. Rossiter, Milford.

Rec. Secretary—Moody Hobbs, Pelham.

Cor. Secretary—H. A. Daniels, Milford.

Treasurer—David Stewart, Amherst.



A HOUSE TO LIVE IN.

Few things are dearer to us through life than the memories of the old Homestead,—the house in which we were born, the old familiar barn, the garden and orchard, the pastures where we rambled,—the pleasant brooks where first we cast a hook for the speckled trout, or the millpond that bore us upon its surface in our first nautical adventure, or where our piscatory tendencies were developed, and the roach and perch and voracious pike were the reward of our patience and skill. So the memories of the silent woods, or of their deep sounding bass in a storm, or a look out from the hills, are indelibly impressed upon the mind of those born and brought up in the country. But there is another class of recollections, more deeply seated than these, which go to make up some of the purest enjoyments of life, and which influence us in a greater or less degree in all its varied duties and pursuits. It is the recollection of our early associations with parents, brothers, sisters, and neighbors,—intercourse with the dearly-loved, when the heart was young, and free, and susceptible of impressions that cannot be obliterated by time, or space, or care.

How important, then, that the House in which we live, together with all its surroundings, should be of such a character as to impart agreeable emotions and impressions; to leave upon the mind that is to be called into the busy whirl of commercial affairs, the anxious duties of professional life, or the unsatisfactory preferments, even, of political success, the delightful recollections of youth, and home, and the wholesome principles inculcated in well-ordered households. Such early impressions are a sort of capital, a bank upon which we may draw with pleasure and profit through life. Indeed, they often mould the affections and lead them into a current in which the whole character takes its course, and becomes exemplary or pernicious as the early tendencies have prevailed.

The influence of the *physical* home has been too long underrated among our people. It has too long been conceded that a roof over the head, a floor beneath the feet, a fire-place and bed, were all that was necessary for the comfort and happiness of the family. Happily, these views are giving place to those of a more comprehensive nature, and more

in consonance with the progress which has been made in almost everything which conduces to elevate the moral and material condition of man.

There is one point, at least, which ought to be well considered by every person who is about to build—and that is as to what the *general appearance of the structure* shall be. It is as easy, and as cheap, to erect a building that shall have some pretensions to architectural taste, and which shall be attractive and pleasing to the eye, as to construct it in violation of all rules, and render it a blotch upon the natural beauties which may surround it. In order to accomplish this the proprietor himself, must possess some knowledge of construction, or have before him some plan which he is willing to adopt. Therefore, to be of service to those about building, we propose to give, in the course of the coming year, in our columns, such perspectives and outlines of buildings as we think may be useful as suggestions or as may be adopted in full.

The picture which we present above is rather as an example of taste, than as such a house as would be recommended for farm purposes. We shall, however, give others, suited to the farmer's wants, and which will have the merit of being constructed at a cost coming within the means of most of those who build, and at the same time, possessing such conveniences and architectural proportions as will make it a credit to its owner.

HUSK BEDS.

As each autumn has returned, for several years past, we have advised all corn-growers to save their husks for under beds, believing they are the very best substance for this purpose that is or can be used. They should be the inner husks, clean and whole, and spread on some airy floor for a few days in order that they may become perfectly dry. Then they may be put into the ticks, and they will last for many years. We have some of these under-beds now in our house which have been in use more than twenty years; and with an annual ventilation and beating, by being emptied on a chamber floor, and with a little replenishing with new husks, they are now as good and lively as when new. The husks had better not be stripped up as some have done. This makes the substance finer and more liable to mat up. Let the husks be whole, and, drying in irregular shapes, they will retain those shapes and lie lively in the bed for a long time. There is a beard, or fuzziness, on each husk, that prevents any insects crawling through the beds; consequently they are entirely free from vermin, of which straw is apt to be full. They are, therefore, clean, sweet and healthy. A good husk bed is equal to the best mattress for summer use, and we have slept in feather beds in winter not half so soft as these.

The best time to save the husks is when in the act of husking the corn. By a little practice, the husker will soon learn how to strip off first the outside, coarse husks, and by another motion, seize the inner ones, (removing the silks at the same time,) and dropping them into a basket at his side. It will take a little longer to husk out a bushel of corn

so, but the husks will most richly repay for the extra time. When this process has been omitted, it will not be a great job to visit the husk pile after the corn is removed, and by hand, pick out enough of the clean, inside husks to make a bed. We consider such a bed worth a five dollar bill. After being made, there is no need of ever going after straw with which to fill the under beds. The job once done, is done for life.—*Drew's Rural Int.*

For the New England Farmer.

THE MOST NUTRITIOUS BREAD.

The various tissues of the body, as bone, fat and muscle, are formed from certain elements contained in the blood, and conveyed by it to the formative vessels. These elements are obtained from the food, and conveyed through the lacteal vessels into the blood vessels. That food that supplies most abundantly all the elements needed to build up all the tissues of the body, or which supplies them in proportions best suited to the actual wants of the body, must be the most nutritious, and must impart the most strength and vigor to the frame. The bread in use among us is chiefly made of wheat. In the process of manufacturing wheat, it is separated into two parts, the flour and the bran. We use the flour for bread, and consign the bran to the use of the pigs and other animals. The corn bread and the "rye and Indian," upon which the former race of "hardy New Englanders" were raised, is comparatively unknown in the present generation. I propose to inquire whether the fine flour, of which our bread is almost wholly made, is capable of supplying in the greatest abundance, those elements of which the various tissues of the body are formed.

According to Johnston's tables, one thousand pounds of wheat meal contain of

Muscle material.....	156 lbs.
Bone material.....	170
Fat material.....	28
	354 lbs.

One thousand pounds of fine flour contain of

Muscle material.....	130 lbs.
Bone material.....	60
Fat material.....	20
	210 lbs.

Now if we subtract the tissue-forming materials contained in fine flour, from those contained in wheat meal, we find that one thousand pounds of wheat meal contain 144 pounds more than one thousand pounds of fine flour. These tissue-forming elements are necessary to supply the waste that is constantly going on in the system. The more rapid is the waste from labor or exposure, the more necessary are they to the animal system.

The Yankee who is always in motion, always in a hurry, and by his incessant activity keeps up a continual friction in his system, needs a large supply of tissue-forming material in his food. Living as he does upon flour bread, his bones are small, his muscles are lean and tough as whip cords, and the fat cells of his cellular membrane are almost wholly destitute of fat. His bread should be made of wheat meal, and if to this were added a large per centage of corn meal, which contains a larger proportion of fat-making material, it would fill up his fat cells, and render the contour of his whole frame less angular and furrowed, and increase in him that *embonpoint* that contributes so much to the good looks of

John Bull. When we live upon fine flour, we are throwing away, every day of our lives, a large part of those elements of nutrition that are essential to our strength and vigor. Is it any wonder then, that our children grow up effeminate and delicate? Instead of being fed upon coarse bread, and sent into the open air for exercise, by which their lungs and limbs may be expanded and developed, they are fed upon the finest flour, and kept within doors in airtight houses, like plants in a hot-bed, and like them, they wilt upon exposure. If regard to the health of ourselves and our children, will not lead to a change in this regard, I might at the present time, when all bread-stuffs are almost at famine prices, appeal to the pockets of our countrymen. A thousand pounds of wheat meal cost but about two-thirds as much as a thousand pounds of fine flour, and yet the former contains 144 pounds more of the very material which is most essential to our health and vigor.

It has been slanderously affirmed that the most sensitive nerve of the Yankee leads to his pocket. Now I do not believe this, and yet his pocket nerve is apt to respond rather quickly to the touch. If the rough handling to which this nerve has been subjected for the last year, shall lead him to look about him and inquire how the greatest amount of the necessary elements of nutrition can be obtained for the least money, it may benefit him not only on the score of economy, but also on that of health. And the benefit to his children may be even greater than that which he may experience in himself. R.

Concord, Nov. 13, 1855.

"HAULING" IN OXEN.

MESSENGERS. EDITORS:—In a late number of your valuable paper, I find an inquiry for a remedy for "Hauling" in Oxen.

Having dealt in and used oxen for the last twenty years, I have frequently purchased those that had become addicted to the vicious habit of "hauling." The cause of this is perfectly simple, and the remedy equally so. The cause of oxen hauling is to be attributed uniformly to their having been worked in too short a yoke. Hence the proper remedy is to put on a longer yoke—say, for large oxen, two feet between the inside bow holes, and my word for it your oxen will not "haul" worked in such a yoke. And here let me add, that it is a great error among many of our best farmers, particularly in the western and more level portions of our State, to work their oxen in too short a yoke. It must be apparent to every observer, that they will work much easier in a long than short yoke. I have purchased a great many cattle of the very best farmers in your county, and in the Genesee valley, and have always noticed this defect in their yokes, while in the central and more eastern portions of the State, they are obliged to use longer ones. Indeed, how would our Eastern or New England farmers plow on their hill-sides with a Monroe or Livingston Co. yoke on their oxen? If oxen are addicted to "crowding," apply the short yoke.

If you deem this worthy of a place in your paper in answer to the inquiry of "K.," you are at liberty to give it an insertion. E. TERRY.

Waterville, N. Y., Oct. 20, 1855.

EDS. RURAL:—To prevent oxen from hauling, I have seen the following tried several times, and al-

ways with success. Take a strong cord, (a good fish-line will answer,) and tie it to the end of the inside horn of each ox, short enough so they will straighten the cord, before they can haul on the yoke. They soon give up, and a few trials will completely break them of the habit.—A SUBSCRIBER.—*Alexander, N. Y., Oct. 2.—Rural New-Yorker.*

THE TOWN OF BILLERICA.

We have before us a well printed pamphlet of one hundred and fifty-two pages, giving an account of the celebration of the *Two Hundredth Anniversary* of the incorporation of the town of Billerica. All the arrangements for the occasion were made by the town, in its municipal capacity, and were carried out in a liberal and comprehensive spirit. Many gentlemen who were born in the town, but who had become scattered abroad and made their mark in the world, were gathered within its limits once more, and gladdened the occasion with their presence and their words of wisdom. Many ladies were also present, who returned to the place of their nativity, or who accompanied their husbands to celebrate this anniversary; so that the gathering was of the most social and happy character.

Col. JOHN BALDWIN was President of the day, and, assisted by his competent friends and neighbors, directed the affair in a prompt and pleasant manner, which was gratifying to all. A hymn was read, composed for the occasion by Miss E. A. FOSTER, one of the daughters of Billerica, after which an admirable Address was delivered by the Rev. JOSEPH RICHARDSON, of Hingham. Then followed a Poem, abounding with capital hits and happy thoughts, by DANIEL PARKER, M. D., of Billerica. After a short recess, the crowd gathered around the amply spread table, and partook of an excellent dinner.

The third regular sentiment was—"The Plow—Its one share in a bank of earth is worth ten in a bank of paper."

This, being strictly agricultural, and our response being of the same character, we have no hesitation in introducing it here, as follows:—

MR. PRESIDENT:—It is always gratifying to me to speak of my favorite art—and it is particularly so on such an occasion and before such an audience as this. I call it an *Art*; but it is not purely so, because to be a good farmer requires some knowledge of many of the *sciences*, as well as of the *Arts*. The mechanic is greatly aided by strict mathematical guides, and the professional man is surrounded by forms and rules which lead him along in the same course which others have trod for thousands of years. But it is not so with the farmer. There are few rules to guide him, and little that he does at one time is positively reliable at any other, because the circumstances under which

he labors are so variable. He enters his fields with the great book of Nature open before him, ample in her page, and full of interesting and important teachings; but without many of those helps, the effect of study and experiments of ages, reduced to strictly arbitrary rules, and which, carefully followed, will produce a well-known result.

No man, therefore, needs a sound and ripe judgment, a clear and comprehensive intellect, and a general knowledge of mechanics, of the physiology of plants and animals, of botany, of meteorology, geology, and something of the laws of trade and political economy, more than the farmer. The manner of cropping his fields this year may not precisely answer for the next, because the season may be of a widely different character, and thus require a different mode of treatment. He must lean upon a well-balanced judgment, and the great truths of Nature, stored up by experience and observation.

If I desired to pass an encomium upon Agriculture, I might with propriety point to these substantial homes around us, these churches and school-houses, springing as they have, from the products of your still fairer fields. Or I might contrast it with that which sustained your ancestors nearly two hundred years ago, when these roads were at best but bridle paths, and your gardens and fields were occupied by the grim forests, never lighted but by the council fires of the Indians who occupied them before you. These changes have been wrought with carefulness and toil through long years of economical industry, and a practice of the stern virtues implanted in your bosoms by the noble men and women whose memories you celebrate to-day.

What if one of the dwellings which stood on this plain had been protected from the elements, with all its household goods, its furniture, bedding, wearing apparel, together with the means of travelling which they then possessed, and could be visited and seen by us to-day, would not your admiration be tempered with gratitude to Him who has led you along to these pleasant places, and crowned your labors with peaceful abodes and the fulness of domestic comforts? From those faint and boding beginnings have sprung this little republic, with all its social enjoyments, so unlike the garrisons and perils which surrounded your ancestors two hundred years ago!

How would the fabrics of the farmer's family, then—the homespun woollen gowns, dyed in the chimney corner, and the checked linens, both for dresses and aprons, compare with the glossy silks, Tibets and muslin-delaines, together with the rich shawls, satin cloaks, and elegant Talma capes and Honiton laces, that I see around me to-day! There were then no Lowell or Manchester, turning out thousands of yards of cotton-cloth an hour, to clothe and civilize the world—or carpet-looms to

weave the finest wool into fabrics as soft as the thistle's down, and with colors as bright as the butterfly's wing, to soften the footstep upon the floor, or shut out rude winter winds.

So was the style of living and travelling as different as the style of dress. Plain meats and vegetables,—the turnip instead of the potato,—and principally rye and barley bread, made up the sum of their frugal meals,—and there was less dyspepsia and despondency in those than in our more artificial life. Men and women travelled on foot, or at best, on horseback, two or three upon a single beast, through lonely and intricate paths, when necessity, of one sort or another, compelled them to visit some of the earlier and more populous settlements. Now, we think it a hardship if our horses do not accomplish ten miles an hour, in carriages so set upon springs of steel, and so cushioned as to roll us along as though reclining on beds of down; or, in locomotive houses, at forty or fifty miles an hour, while we eat, drink, smoke or sleep at will, lounge away the time in listlessness, or grumble at the speed which *only* conveys us *sixty* miles an hour! In mid-winter we sit in churches at summer temperature, where, perchance, flowers bloom and shed their fragrance around the worshippers, while soft and entrancing music floats through the vaulted aisles.

In the fields the contrast is as great in the implements with which they cultivated the soil, as in any thing else. Shovels and plows of wood, heavy and cumbrous harrows and carts, and hoes and scythes, exhausted the strength to wield them which should have been devoted to moving the soil. But in the face of these discouragements, the stern old Puritans succeeded in all they undertook; they were methodical, and earnest, and persevering. If separation from friends, grim woods, coarse, and sometimes scanty fare, and savage hate, could not daunt them, neither could the common deprivations and embarrassments of their position, fail to stimulate their exertions. Faith led them here, and it did not desert them when sore and grievous trials pressed them on every side.

"The Plow,—Its one share in a bank of earth is worth ten in a bank of paper."—This sentiment, upon which you have been pleased to call me up, suggests more topics than time will allow me to touch upon now. The *one* share with which your fathers wrought, was but an indifferent affair; we have not only improved greatly upon *that*, but have added another, so that while shares in banks of paper, in railroads, in manufactories and mining companies, are uncertain, unprofitable, or ruinous, the *Plow*, with its two shares, is upturning the soil to the sun and air, and doubling the ordinary profits of the fields.

SAGACITY OF A HORSE.—A young filly belonging to a gentleman in this vicinity, which had been at

pasture during this summer and fall, with a number of other colts, on Pettick's Island, in Boston harbor, was brought over to Quincy Point in tow of a boat, on one of the coldest days of last week. She was then led behind a wagon, (it being evening and the night quite dark) when she broke away and started for the Point. After hunting for her an hour without success, the search was given up, and it was supposed she had taken to the water, and on account of the wind and strong current which was then running like a mill stream, it was supposed she was carried out to sea. But the next day, on going over to the island, she was found quietly feeding with her companions. Considering the distance, which is more than a mile from the main land, and that it requires large leeway and hard rowing for a boat to bring up to the island, also that the night was cold and stormy, it may be recorded as a case of singular sagacity and cunning. Truly this was a pursuit of "companions under difficulties."—*Transcript.*

For the New England Farmer.

ELECTRICITY vs. LIGHTNING RODS.

MR. EDITOR:—As there have been so many articles in your paper upon the erection and construction of lightning rods, that another upon that subject would only appear to add to the vast pile of false opinions and ideas, which are so prevalent upon such a subject, I would not, were I able, put forth any long and elaborate opinion, which, instead of demonstrating any fact or problem, would only confuse the mind of the reader.

But there are a few facts and principles, which I think have never been inserted in the many communications, that are absolutely necessary to be understood with to insure safety from lightning. That the reasons for my simple directions may be more clearly seen, let us examine a few of the most prominent features of electricity, the causes which produce it, as we see it displayed in the thunder storm, or the tempest, and lastly, some of the best means to avoid the many dangers to which it constantly exposes us.

The various phenomena which are to be classed under the head of electricity, and of which thunder and lightning are one, are very imperfectly understood. Some facts, and the principles explaining them, have been thoroughly investigated—but others baffle all human efforts. There is a certain *something*, called by philosophers electric fluid, which is naturally diffused over *all* bodies. It is in the chair on which I sit, in the table, the paper, my hand—in a word, in everything. In its natural state, it is equally and generally diffused, producing no sensible effects. But there are certain causes which collect it. When it is thus accumulated in one place, or upon one body, it produces very striking results. Among the processes by which the electric fluid is accumulated and thus prepared to produce these sensible effects, one of the principal is, the *rapid condensation* of vapor. This might be shown by a simple electrical experiment, which I have not time or space to relate. One of the most prominent features of electricity is, that some substances afford it easy passage over them, while others do not. The former we call *conductors*, the latter *non-conductors*; metals and water are conductors, almost all other substances are non-conductors.

When there are collected in one place large quantities of electricity, if there are conductors, or a chain of conductors to convey it away, it passes off *silently*, without any sensible effect. If there are no conductors, it accumulates until it becomes excessive in quantity, it darts off through the air, or any substance which lies in its way, often doing irreparable injury. Splendid and appalling as these results sometimes are, they are imitated precisely, but harmlessly, by the apparatus of the lecturer. When it darts to the earth it always chooses the *best conductors* in its path.

The process by which electricity is accumulated in the thunder storm, is, as has been said, by the rapid condensation of vapor. We do not, it is true, always have thunder and lightning when clouds form in the sky. It is only when the black, well-defined clouds rise in the north-west, that the *fluid forms faster than it can escape*.

Now when a cloud becomes excessively charged with the fluid, it must be at the expense of some surrounding cloud or locality, and it generally happens that this cloud or locality is *nearest* the one that is filled. Now as the air is a perfect non-conductor, the quick passage of the fluid from one cloud to another is easily afforded by the moisture contained in the air, or through some substance upon the earth. Thus it often happens that the fluid is seen to pass from a cloud to the earth and then to another cloud. Or, sometimes the spot upon the earth has less than its natural share. If in its passage in either the above instances, any body lies in its way, it will be struck, and receive injury in proportion to its ability to conduct it away. Then the only means by which we can avoid its effects is to place as perfect conductors in its circuit as possible.

Granting the above facts to be true, which I think no one will dispute, the philosophy and utility of lightning rods are evident. But to explain how they may, in my opinion, afford that protection desirable, is the object of this article. That they are seldom if ever erected *philosophically*, is, I think, true. If one part of them is as it should be, there is always something around or about them to utterly destroy their utility. The rod should always be of square iron, about one-half inch; it should pass through glass insulated, not fastened with iron spikes, but with wooden brackets, painted, and nailed with copper. They should be of sufficient size to admit the rod to pass through them freely. The points of the rod should be plated with silver to prevent them from corroding, and the ends instead of being linked should be screwed together, after the manner of joining steam pipes, that the ends may touch one another. The foot should be of copper, or some metal not easy to corrode, and placed in a well, or perpetually moist place. I think one rod upon any ordinary house would be sufficient. They should project above the house in proportion to the size of the house. A rod, placed upon a house in the manner I have just described, will, I think, protect it. And just as far as one departs from this manner, in just that proportion will the efficiency of the rod be impaired; and for these reasons. The rod is constantly surrounded by an electric current during a thunder storm or shower. If, in the travels of the shower, it happens that a cloud positively electrified approaches the house, very likely some spot around it is negligently charged, or has less than its natural share, then that in the former darts to the latter

to restore the deficiency. Now if the rod is adjusted in the manner I have described, it will draw it from the cloud and conduct it silently and insensibly to its destined spot. If not, it will prevent obstructions to its passage, and these will cause the fluid to explode, thereby causing damage to life and property. The rod should never be painted, because the fluid only passes over the surface of the rod, the oily matter being a perfect non-conductor.

These few, simple directions are not expensive, but I think I have never seen them in print. It is true, we know but little of that subtle fluid, especially in its natural state, where it works silently and unseen, exerting, probably, in the hands of the Author of Nature, some important object.

Its powerful agency works unseen on the intimate relations of the parts and properties of bodies, effecting changes in their constitution and character, so wonderfully minute, thorough and universal, that it might almost be considered as the chief agent of nature, the prime minister of Omnipotence.

The science of electricity has proved, in many instances, the key by which we have entered into the innermost recesses of nature, and discovered the secret of many of her operations. It has, in a great measure, lifted the hitherto impenetrable veil that has concealed the many mysterious workings in the material world, and has opened a field for thought, and inquiry, as boundless as it is inviting.

Westboro', 1855.

W. S.

For the New England Farmer.

RELATIVE VALUE OF OATS AND CARROTS.

MR. EDITOR:—In reply to one of your correspondents, who makes inquiry respecting the relative values of oats and carrots, for feeding horses, sheep, &c., I would state the following, gathered from a reliable source.

Oats are remarkable for the amount of gluten and fat they contain, being superior in respect to the former, and but little inferior in respect to the latter, to Indian corn, as will appear from the following numbers:—

	Scotch oat meal.	Indian corn meal.
Water.....	14.....	14.....
Gluten.....	18.....	12.....
Fat.....	8.....	8.....
Starch, &c.....	62.....	66.....
	100	100

There is a difference, in different kinds of oats, in regard to the amount of gluten they contain. Scotch oats—the kind taken into the present account—contain more gluten than the American. The gluten and fat which the oats contain render them exceedingly nutritious for beast as well as for man.

They are used more extensively in the British Isles, and especially in Scotland, than in this country, or, indeed, in any other, as far as is known. They admit of cultivation in higher latitudes than wheat—oats growing as far north as 65°, while wheat ceases at 60°, in Europe.

Carrots contain a much larger amount of water, and a much smaller amount of dry food, than oats, the relative proportion being 83 pounds of water and 17 of dry food, in every hundred pounds. By the above table you will see that oats contain more dry food and less water, the proportion being 86 pounds of dry food and 14 of water in every 100 pounds.

The gluten, starch and sugar of carrots are held in solution by the water they contain, and this renders them more easy of digestion, but less substantial and strengthening. Carrots are often fed out to horses when not at hard work, but when a long journey is to be performed, or a piece of hard work to be done, oats are preferable.

Many choose corn for working animals. It contains less of the nutritious gluten, but more of the bulky and porous starch, than oats. Starch is what the rice-eating Hindoos and the potato-eating Irish distend their "fair round bellies" with. Corn contains more oily matter than oats, and this is what gives it its peculiar fattening properties, and renders it an appropriate article of food for swine that are contending for premiums, or the earliest acquaintance with the butcher's knife. Carrots are undoubtedly a wholesome and nutritious article of food for sheep, and might be used for this purpose to a much greater extent than they are, but they are not so nutritious as oats. In this connection I would say a word in reference to wheat as an article of food.

Few persons, I imagine, know how little of the nutritious element, which this grain possesses, they obtain, in the ordinary way in which it is prepared. The proportion of gluten contained in the whole grain is 12 per cent.; bran, 14 to 18 per cent.; fine flour, 10 per cent. From these numbers, it is seen that meal made from the whole grain contains 2 per cent., and that from the bran, from 4 to 8 per cent. more gluten than fine flour. And where there is more gluten, there is more nourishment, as we have said before. And furthermore, experiment shows that bread made of the meal of the whole grain is more salutary. Such being the facts, the wonder is that we persist in eating fine flour bread, and in thinking the finer flour is, the better it is. Common sense teaches that here is not only an opportunity, but an actual need of reform.

Concord, Nov. 5th.

J. B. B.

DEATH OF PROF. J. F. W. JOHNSTON.

This gentleman, distinguished and widely known in Great Britain and America through his Agricultural writings, died at his home in Durham, in his 60th year, on the 18th of Sept.

His writings are voluminous and replete with instruction. His principal work, "*Lectures on the application of Chemistry and Geology to Agriculture*," first published in 1844, and since gone through several editions both in Great Britain and this country, is a systematized encyclopædia of Agricultural science. For a number of years he was chemist to the Agricultural Chemistry Association of Scotland, and to the Highland Agricultural Society, and very many important papers issued from his laboratory. Mr. Johnston visited this country in 1849, at the invitation of the N. Y. State Agricultural Society, and delivered the address at their State Fair—visiting also Canada and New Brunswick. On his return he published a report upon the Agriculture of New Brunswick, and his "*Notes on America*." Prof. Johnston's works show in general great care and judgment in the selection and weight given to facts employed and statements made, but in these two, a painful want of this characteristic was observed. His recent work entitled "*Chemistry of Common Life*," is a very valuable and interesting book—its science is sound, and ap-

plying as it does the great facts and principles of chemistry to matters connected with every-day experience, illustrating the one by the other, it will find readers in every class of society, and all will be benefited. His loss will be felt by Agriculturists every where.

HORSE SHOES, AND HOW TO PUT THEM ON.

The shoe must possess substance enough to prevent its bending, and width of web enough to ensure protection to the foot; the thickness, like the width of web, should continue precisely the same from toe to heel, and not, as is generally the case, increase as it proceeds backwards, until at the heel it becomes fully doubled. This is a great evil for many reasons, and among others, that it throws the horse forwards upon the toe, and causes him to strike it against every projection that comes in its way. Now, as horses are sufficiently prone to do this, without the assistance of high-heeled shoes, it should be our business to obviate it as much as possible.

In doing this we only carry out in the shoe what nature has already done in the foot; she has arched the toe of the coffin-bone, to diminish the effect of a jar at the toe; and we do the same to the shoe to lessen the cause of the jar. The common practice is just the reverse of this; it welds a lump of steel into the toe, which only increases its thickness, and the number of obstacles that it necessarily encounters, but, being of a harder texture, is longer wearing down, and consequently exposes the foot to the greatest amount of concussion. Supposing a horse to wear his shoes so hard, that they will not last a month—much beyond which, as the foot will outgrow them, they had better not last—then steel the toe; but still let it be turned up as much out of the line of wear as possible. A small clip at the point of the toe is very desirable as preventing displacement of the shoe backwards; it need not be driven up hard, it is merely required as a check or stay. The shoe should be sufficiently long, fully to support the angles at the heels, and not, as is too often the case, so short, that a little wear imbeds the edge of it in the horn at these parts. The foot surface of the shoe should always have a good flat even space left all around for the crust to bear upon; for it must be remembered, that the crust sustains the whole weight of the horse, and needs to have a perfectly even bearing everywhere around the shoe. In this space the nail-holes should be punched, and not, as is too often the case, partly in it, and partly in the seating. In what is technically called "black-holing the shoe," which means completing the opening of the nail-holes on the foot surface, great care should be taken to give them an outward direction, so as to allow the points of the nails to be brought out low down in the crust. The remainder of the foot surface should be carefully seated out, particularly around the elevated toe, where it might otherwise press inconveniently upon the sole; and I would have the seating carried on fairly to the point where the crust and the bars meet, in order that there may be no pressure in the seat of corns; the chance of pressure in this situation will be further diminished by bevelling off the inner edge of the heels with a rasp.

The ground surface should be perfectly flat, with a fullering or groove running round the outer edge, just under the plain surface, whereon the crust

bears. The principal use of the fuller is to receive the heads of the nails that secure the shoe, and prevent their bending or breaking off:—it is further useful in increasing the hold of the shoe upon the ground, and with this view I always have it carried back to the heels.

The danger apprehended from the shoe being applied to the foot so hot as to burn the crust, and cause it to smoke, is utterly groundless. I would not have it made to burn itself into its place upon the foot, without the assistance of rasp or drawing-knife, but I would have it tried to the foot sufficiently hot to scorch every part that bears unevenly upon it; because the advantage of detecting such projecting portions is very great, and this mode of accomplishing it is positively harmless. Indeed it is the only one by which the even bearing necessary to a perfect fitting of the shoe can be insured.

No shoe should ever be nailed to the foot until it has been ascertained that the pressure of the hands is sufficient to keep it steadily in its place, and preclude any appearance of daylight between it and the foot; for, if the shoe does not accurately correspond to the surface of the foot, but is disposed to shift about upon it, the nails will be exposed to a constant strain in order to keep it in its place; whereas they should merely have to hold it to the foot, and not, as it were, to keep it there by force.

The shoes should not be permitted to remain on the horse's feet more than two or three weeks without removal; for in that time the heads of the nails will have become worn, and, from fitting the holes less perfectly than before, will admit of a trifling motion of the shoe upon the nails; whereby the holes in the hoof will be enlarged, and the security of the shoe endangered. Another reason for removing the shoes, is the opportunity which it affords of paring away those portions of horn which in a state of nature would have been worn down by contact with the ground.

The next circumstance to be considered is one of vital importance to our subject, as upon it depends the amount of disturbance that the natural functions of the foot are destined to sustain from the shoe; viz., the number and situation of the nails which are to secure it to the foot. If they be numerous, and placed back in the quarters and heels, no form of shoe, be it ever so perfect, can save the foot from contraction and navicular disease. If on the contrary they be few, and placed in the outside quarter and toe, leaving the inside quarter and heels quite free to expand, no form of shoe is so bad that it can, from defective form alone, produce contraction of the foot.

Three years ago I commenced a series of experiments upon shoeing, with a view, among other things, of ascertaining how few nails are absolutely necessary, under ordinary circumstances, for retaining a shoe securely in its place. The subjects of my experiments were six horses of my own, and three belonging to friends; the nine among them representing very fairly the different classes of pleasure horses; not indeed including hunters or race-horses, each of which require a separate and totally different treatment, but carriage horses, ladies' horses and roadsters; and they also included the common variations in form and texture of the generality of horses' feet.

When my attention was first directed to the subject of nailing, I was employing seven nails in each fore, and eight in each hind shoe. I then with-

drew one nail from each shoe, thus reducing the number to six in the fore, and seven in the hind shoes; and finding at the end of a year that the shoes of all the horses had been as firmly retained as formerly, I withdrew another nail from each shoe, leaving only five in the fore shoes and six in the hind. I found, however, that six nails would not retain the hind shoes of a carriage horse, without allowing it sometimes to shift; so I returned to seven in the hind shoes, and have continued that number ever since; but five retained all the fore shoes as firmly during the whole of the last year and a half, as six had previously done.

I have invariably directed and superintended the whole operation of shoeing during these experiments; and have always been very careful to mark that the nails were not driven high up in the crust, but brought out as soon as possible; and that they were very lightly driven up before the clinches were turned down, and not, as is generally the case, forced up with all the power that the smith can bring to bear upon them with his hammer. I mention these circumstances to show that my object really was to ascertain how little would retain a shoe, and to what extent the foot might be relieved from the evil of unnecessary restraint; a matter sometimes of great moment, and at all times desirable.

The clinches should not be rasped away too fine, but turned down broad and firm. The practice of rasping the whole surface of the hoof after the clinches have been turned down, should never be permitted; it destroys the covering provided by nature as a protection against the too rapid evaporation of the moisture of the hoof, and causes the horn to become dry and brittle.

Two of the horses alluded to above, worked for some time with only four nails in their fore shoes.

I have detailed these experiments with a view to expose the groundless nature of the fear that expects to cast a shoe at ever step, unless it be held to the foot by eight or nine nails, driven high into the crust. If the presence of a nail in the crust were a matter of no moment, and two or three more than are necessary were *merely useless*, there would be no great reason to interfere with this practice of making "assurance doubly sure;" but it is far otherwise,—the nails separate the fibres of the horn, and they never by any chance become united again, but continue fissured and unclosed, until by degrees they grow down with the rest of the hoof, and are ultimately, after repeated shoeings, removed by the knife.

If the clinches should happen to rise, they must be replaced without delay; as such rising imparts to the nails a freedom of motion which is sure to enlarge the size of the holes,—and this mischief is often increased by the violent wrenching which the shoe undergoes from side to side in the process of removal by the smith.

Now as these holes cannot possibly grow down, and be removed under three shoeings, it will be found that even with seven nails, the crust must always have twenty-one of these separations existing in it at the same time; and as they are often from a variety of causes extended into each other, they necessarily keep it in a brittle, unhealthy state, and materially interfere with the security of the future nail-hold. Unluckily the common practice under such circumstances is to increase the number of nails, with the view of ensuring the security of the

shoe, which increases the evil. My object is to show that these shaky places, as they are called, may be relieved by the omission of one or two of the nails, without endangering the security of the shoe. Suppose the number employed to be seven,—to gain such an end they may safely be reduced to five, which is the largest number I have employed for more than two years; and until I discover some good reason for increasing it, is the largest I intend to employ. But I am far from advising the general adoption of this number; for if from imperfect fitting of the shoe, misplacement of the nails, neglect of removing in proper time, or from any other cause, the horse should chance to cast a shoe, the whole blame would be attributed to the five nails, and the poor beast in all probability be doomed to eight or nine for the remainder of his life. I do, however, very strongly advise the adoption of six, knowing them to be fully sufficient for retaining the shoes of all pleasure horses under all circumstances, except perhaps hunters. Since the foregoing was published, Colonel Luttrell, master of the Somersetshire fox-hounds, has informed me that the horse which he rode most frequently last season was shod with six nails only,—not one of which, in consequence of his cutting a good deal, was placed in the inner quarter,—and that he experienced no inconvenience whatever from the plan. If I had entertained the smallest doubt about their efficacy, it would have been entirely removed on the arrival of the Thirteenth Light Dragoons last year in Exeter; for among the horses of that regiment, I found, through the kindness of Lieut. Col. Brunton, who allowed me to inspect the shoeing, strong confirmation of the truth of the position. Here were horses with a variety of feet shod with six nails only, and these all placed in the outside limb and toe of the shoe, all the remainder of the shoe remaining free and unattached to the foot. Mr. Legrew, the very intelligent veterinary surgeon of the regiment, informed me that he had not employed more than six nails for nearly two years, and that the loss of a shoe was a very rare occurrence with them, even on a field day, than which there is scarcely any work more trying to the security of horses' shoes. Any mode of fastening that has proved itself equal to retaining the shoes through a long field-day, in stiff ground, may very safely be recommended as fully sufficient for all ordinary purposes.

The question of the efficacy of six nails for road work is settled, I should think, to the satisfaction of the most skeptical, by the fact of the Thirteenth having done the Queen's escort duty during their year at Hounslow without the loss of a single shoe. Any one acquainted with the rapid pace at which her Majesty invariably travels on the road, will readily admit the sufficiency of the test.—*Miles on the Horse's Foot.*

As an evidence of the sport to be had in Texas, we give the following, from the *Austin Gazette*:

"We frequently hear of fine sport in bear hunting in our upper valley. Some panthers, too, and leopards are occasionally killed. But the last specimen is related by the *Liberty Gazette*. The editor says in the last number that Ben. M. Green, of that county, killed in twelve consecutive mornings before dinner, thirteen bears, one panther, one wildcat, and seven deer. No wonder that a Texan can whip his weight in wildcats."

For the New England Farmer.

MICE, AND YOUNG FRUIT TREES.

MR. EDITOR:—Young orchards are liable to be much injured by mice “girdling” the trees while the ground is covered with snow, and as I have noticed some suggestions in the papers recently, in regard to this matter, I will state, if you please, how I contrived to prevent the evil on my own trees.

Found some old waste tin, such as there is plenty of “lying round loose” in the vicinity of tin shops; cut into irregular sized pieces from five to ten inches square, turned over a narrow strip of edge on two opposite sides so as to “lock” together when bent about the tree, in the form of a hoop or tube. These are readily placed about the tree, and removed again in the spring. It is immaterial about the space inside, between the tube and tree, or it may be well to fill with saw-dust or earth. If slightly pressed down at the base, the tube will not get out of place, and will effectually protect the tree from mice during the winter, at a first cost less than one cent per tree. The tins will last for many years.

Two years ago I had some thrifty pear trees set near the foot of grass terraces. The following winter they were nearly all girdled by mice, so that I lost some thirty trees. I reset again in the spring, and last winter tried the tin tubes, occasionally leaving a tree without any protection. Not a tree with the tin about the base was touched by mice, while those without were destroyed same as previous winter. I have tried treading down snow and piling up earth about young trees, but have found nothing so effectual as the tin tubes. There is no danger of injury to the tree by using them.

Messrs. Cushing & Mack, tin workers of this city, will furnish any quantity of these tubes, to our neighboring fruit-growers, at a trifling expense.

Lowell, Nov. 27, 1855.

R.

THE GRAPE.

Its Medicinal Properties—Influence upon the Blood, Liver, Kidneys, and other Organs—Appreciated in Vine-growing Countries—Its efficacy in Dyspepsia—Best Grown in Cities—Manures for—Layering—Pruning—Cuttings—Prices, &c.

The grape is a fruit held in high estimation by those who have been accustomed to use it freely. It is not, however, generally known, perhaps, that in addition to its other excellent qualities, it possesses medicinal virtues which, of themselves alone, would seem to present a sufficient inducement for its cultivation.

In France and Spain, and other vine-growing countries, these medicinal properties of the fruit are well understood and appreciated, experience having demonstrated that a free use of the grape has a most salutary and invigorating effect upon the animal system; that it dilutes the blood, removes obstructions, particularly from the kidneys, liver, spleen, and other important organs, imparting a healthy tone and a vigorous circulation, and increasing the strength of the entire physical economy.

In cases of dyspepsia—a disease which is the foundation of many others—and all diseases of the

liver, by which health is not only destroyed, but the mental powers sadly affected, a “grape diet” is almost the only remedy resorted to, and generally with success. It is asserted, on reliable authority, that those who labor in the vineyards, and who are accustomed to partake constantly and liberally of the fruit, are never troubled with that disease. Those who are subject to it in cities, and other places where the grape is not cultivated, on the development of the symptoms of the complaint, resort to the grape regions for the benefit of the “grape diet,” or “grape cure,” and where the disease has not become confirmed, and the system reduced beyond the power of remedies, a radical cure is often the result.

The nutrimental properties of the ripe grape are considerable, and it is said men may live and labor on it as an exclusive article of food, and without becoming exhausted, for a much longer period than upon a diet of any other species of fruit. It is both stimulating and invigorating, and by retaining the stomach in a healthy tone, promotes the general health, and energy of all the parts.

The culture of this truly valuable fruit should be encouraged. It succeeds well on almost every variety of soil, and will bear lucrative crops with very little care or manure more than may be supplied by every kitchen. At present, no production yields a more liberal profit. The demand for it in our markets is much more likely to increase than diminish for the next half century. Insipid Black Hamburgs, grown in hot-houses, are now selling for one dollar and twenty-five cents a pound, and Isabellas—though very few can be obtained—for more than half that sum.

Nearly all the grapes that are grown near Boston are ordered before they are fairly out of blossom, and at a price scarcely ever less than one dollar a pound for the Muscat of Alexandria and Golden Chasselas, and seventy-five cents, perhaps, for the Black Hamburgs.

This delightful fruit has the advantage, too, of being more successfully raised in the city, than in the country, as the close streets and sunny sides of buildings, or the well-protected yards afford such a shelter as to ensure the ripening of an annual crop of the Isabella, Catawba, Concord, Diana, Amber, and other varieties; while the street-sweepings and the daily wash of the kitchen, compose the pabulum of all others the best suited to their nourishment.

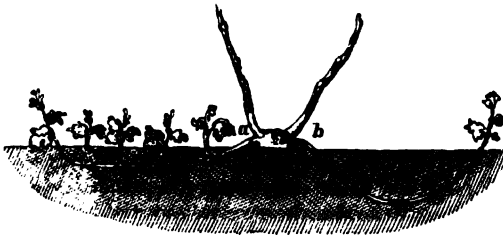
Thousands of the little squares composing the front yards of the city, though containing not more than three or four feet by six in length, if dug out and supplied with proper soil, would sustain a vine which might produce a bushel or two of grapes annually. In such positions, the vines would be highly ornamental, and exert a beneficial influence on the atmosphere the people are breathing. In

some cities this is extensively done. In Rochester, and in Brooklyn, N. Y., flourishing vines are found in every part of the city, in the most compact, as well as the sparsely settled portions; and in late summer and autumn, few of the citizens are unsupplied with this cooling and invigorating fruit.

We have prepared this article at this time to afford the opportunity of suggesting a few things in relation to planting, pruning, cuttings and layers—but particularly that pruning may not be too long delayed.

"The object of pruning is to remove all superfluous wood, and thereby strengthen the vine, so as to render it long-lived, and capable of bearing and ripening the proper quantity of grapes." The proper season is, any time after the fall of the leaves, and before the starting of the sap. As the grape vine is very sensitive of the solar influences, a few warm days, even in autumn, or in February, may sometimes set the sap in motion; early pruning is therefore best, certainly as early as the first of March, and earlier if convenient, say in February.

LAYERING GRAPE VINES.



This cut very plainly illustrates the mode of laying down the shoots which spring out near the ground, and from which valuable roots may be obtained. The branch should be sunk some six or eight inches below the surface, in a moist, light and rich soil, and after the first year, half cut off, and after the second, entirely, and then it is an independent plant, standing upon its own roots.

PLANTING CUTTINGS.



Planting cuttings, the pieces being each about twenty inches long, is the easiest, most certain, and best way of propagating the vine, and the cut annexed very well illustrates the manner of doing it.

Reemelin, in his *Vine Dresser's Manual*, says the "cuttings" should be from healthy vines, not more than ten nor less than three years old, and of the early spring's growth of the previous year. His

way is to plant them perpendicularly, making the holes deep enough to have the upper bud half an inch below the surface of the ground.

Success in grape culture mainly depends upon getting a large, healthy and vigorous root penetrating some one or two feet below the surface, and surrounded by numbers of fibrous roots. These stretch away in every direction, through the mellow soil, in search of the nourishment which they require in order to load the vine with fruit. In order to accomplish this, it will not answer to let the vine have its own way, by throwing out numerous branches, and extending some of them ten, twenty, or perhaps thirty feet in a season. This course would give a great crop of wood, and very little fruit. After the cutting has grown one year, it must be pruned back to within three eyes or buds from the ground. This must be done the second and third year, but leaving such side shoots as are desired to extend horizontally. PRINCE says the same general rule is to be observed in pruning grapes that prevails in pruning trees,—to keep the shoots sufficiently apart to admit the sun and air, and not to cross and interfere with each other. We

are inclined to think something more is necessary, and as cuts will illustrate much better than words alone, we propose, by-and-by, to take up the subject again, and speak more particularly of the pruning required at the various ages of the vine.

We cannot close now, however, without earnestly recommending to all to make early preparation to PLANT A GRAPE VINE.

For the New England Farmer.

A NEW WASH FOR TREES.

Noticing an allusion to the washing of trees with lye, by Mr. Underwood, in the *N. E. Farmer*, of December 1st, I was reminded of the propriety of again noticing a wash for apple trees which I have used with satisfaction for the past three years. Two years ago, I incidentally spoke of it in this journal, and though out of season now, I venture to again call attention to it, hoping that some one else may test it.

Procure *soap-stone dust*, at the workers of soap-stone, sift it to get out the stones, if you choose, mix it up to the consistence of paint, with soap-suds, and add a very little slaked lime, and if you wish to give it an agreeable tint, stir in a very little yellow ochre. Apply this mixture with a brush to your young apple trees in the early part of the summer, and it will prevent the growth of moss, will keep the trunks cool, (which lye does not) and will give them a handsome, neat and healthy appearance.

Lye is dangerous, and requires much experience. Lime is too stiff, and closes the pores of the bark. But the soap-stone dust incorporates with the bark, and in the winter season, presents a handsome buff color, which cannot be rubbed off. There is not the least danger, I think, in the use of this wash, or its incorporation into the bark, as the soap-stone

dust is mostly composed of clay, and the lime and ochre found, in some form, in the soil. Besides, my trees are healthy, and this fact is better than theory.

Perhaps this dust mixed with some other substances, would be found beneficial—for instance, with guano, for pear trees.

D. W. L.

W. Medford, Dec., 1855.

ON FEEDING ANIMALS.

EFFECT OF LONG-CONTINUED DAIRY HUSBANDRY UPON THE QUALITY AND PRODUCE OF THE SOIL.

And whence does the mother derive all this gluten and bone-earth, by which she can not only repair the natural waste of her own full-grown body, but from which she can spare enough also to yield so large a supply of nourishing milk?

She must extract them from the vegetables on which she lives, and these again from the soil.

The quantity of solid matter thus yielded by the cow in her milk is really very large, if we look at the produce of an entire year. If the average yield of milk be 3000 quarts, or 750 gallons, in a year, (every 10 gallons of which contain bone-earth enough to form about 7 ounces of dry bone,) then by the milking of the cow alone we draw from her the earthy ingredients of 33 lbs. of dry bone in a year. These are equal to 40 lbs. of common bone-dust, or 3½ lbs. in a month. And these she draws necessarily from the soil.

If this milk be consumed on the spot, then all returns again to the soil on the annual manuring of the land. Let it be carried for sale at a distance, or let it be converted into cheese and butter, and in this form exported—there will then be yearly drawn from the land from this cause alone a quantity of the materials of bones which can only be restored by the addition of 40 lbs. of bone-dust to the land. If to this loss from the milk we add only 10 lbs. for the bone carried off by the yearly calf,* the land will lose by the practice of dairy husbandry as much bone-earth as is contained in 50 lbs. of bone-dust—or in 45 years every imperial acre of land will lose what is equivalent to a ton of bones.

After the lapse of centuries, therefore, we can easily understand how old pasture lands, in cheese and dairy countries, should become poor in the materials of bones—and how in such districts, as is now found to be the case in Cheshire, the application of bone-dust should entirely alter the character of the grasses, and renovate the old pastures.

OF THE GROWING OF WOOL, AND ITS EFFECTS UPON THE SOIL.

The rearing of wool affords another beautiful practical illustration, both of the kind of food which animals require for particular purposes, and of the effect which a peculiar husbandry must slowly produce upon the soil.

Wool and hair are distinguished from the fleshy parts of the animal by the large proportion of sulphur they contain. Perfectly clean and dry wool contains about 5 per cent. of sulphur, or every 100 lbs. contain 5 lbs.

The quantity as well as the quality of the wool

yielded by a single sheep varies much with the breed, the climate, the constitution, the food, and consequently with the soil on which the food is grown. The Hereford sheep, which are kept lean, and give the finest wool, yield only 1½ lbs.; but a Merino often gives a fleece weighing 10 or 11 lbs., and sometimes as much as 12 lbs.

The number of sheep in Great Britain and Ireland amounts to 30 millions, and their yield of wool to 111 millions of pounds, or about 5 millions of pounds of sulphur, which is of course all extracted from the soil.

If we suppose this sulphur to exist in, and to be extracted from, the soil in the form of gypsum, then the plants which the sheep live upon must take out from the soil, to produce the wool alone, 30 millions of pounds, or 13,000 tons of gypsum.

Now, though the proportion of this gypsum lost by any one sheep farm in a year is comparatively small, yet it is reasonable to believe that, by the long growth of wool on hilly land, to which nothing is ever added, either by art or from natural sources, those grasses must gradually cease to grow in which sulphur most largely abounds, and which favor, therefore, the growth of wool. In other words, the produce of wool is likely to diminish, by lapse of time, where it has for centuries been yearly carried off the land; and, again, this produce is likely to be increased in amount when such land is dressed with gypsum, or with other manure in which sulphur naturally exists. Of course, this general conclusion will not apply to localities which derive from springs or other natural sources a supply of sulphur equal to that which is yearly removed.

OF THE PRACTICAL AND THEORETICAL VALUES OF DIFFERENT KINDS OF FOOD.

From what has been stated in the preceding sections, it appears, as the result both of theory and of practice, that different kinds of food are not equally nourishing. This fact is of great importance, not only in the preparation of human food, but also in the rearing and fattening of stock. It has, therefore, been made the subject of experiment by many practical agriculturists, with the following general results:

1. If common hay be taken as the standard of comparison, then, to yield the same amount of nourishment as 14 lbs. of hay, experiments on feeding made by different persons, and in different countries, say that a weight of the other kinds of food must be given, which is represented by the number opposite to each in the following table:—

Hay.....	10	Carrots, (white).....	45
Clover hay.....	8 to 10	Mangold-wurtzel.....	35
Green clover.....	45 to 50	Turnips.....	50
Wheat straw.....	40 to 50	Cabbage.....	20 to 30
Barley straw.....	20 to 40	Peas and beans.....	8 to 5
Oat straw.....	20 to 40	Wheat.....	5 to 6
Pea straw.....	20 to 15	Barley.....	5 to 6
Potatoes.....	20	Oats.....	4 to 7
Old potatoes.....	40?	Indian corn.....	5
Carrots, (red).....	25 to 30	Oil-cake.....	2 to 4

It is found in practice, as the above table shows, that twenty stones of potatoes, or three of oil-cake, will nourish an animal as much as ten stones of hay will, and five stones of oats as much as either. Something, however, will depend upon the quality of the sample of each kind of food used—which we know varies very much, and with numerous circumstances; and something also upon the age and constitution of the animal, and upon the way and

* It has been estimated that the proportion of bone in the—

Horse	= .125 of the live weight.
Sheep, old, (Merino,)	= .125 of live, 20 of dead do.
	= .33 nearly of flesh and fat.
Pig, unfatted,	= .17 of live .20 of dead do.

form in which the food is administered. The skillful rearer, feeder, and fattener of stock knows also the value of a change of food, or of a mixture of the different kinds of vegetable food he may have at his command—a subject we have considered in a previous section.

2. The generally nutritive value of different kinds of food has also been represented theoretically, by supposing it to be very nearly in proportion to the quantity of nitrogen, or of gluten, which vegetables contain. Though this cannot be considered as a correct principle, yet as the ordinary kinds of food on which stock is fed contain in general an ample supply of carbon for respiration, with a comparatively small proportion of nitrogen, these theoretical determinations are by no means without their value, and they approach, in many cases, very closely to the practical values above given, as deduced from actual trial. Thus assuming that 10 lbs. of hay yield a certain amount of nourishment, then of the other vegetable substances it will be necessary, according to theory, to give the following quantities, in order to produce the same general effect in feeding:—

Hay.....10	Carrots (red).....35
Clover hay*.....8	Cabbage.....35 to 40
Vetch hay.....4	Pease and Beans.....2 to 3
Wheat straw.....52	Wheat.....5
Barley straw.....52	Barley.....5
Oat straw.....55	Oats.....5
Pea straw.....6	Rye.....5
Potatoes.....28	Indian corn.....6
Old potatoes.....40	Bran.....5
Turnips.....60	Oil-cake.....2
Mangold-wurtzel.....60	

If the feeder be careful to supply his stock with a mixture or occasional change of food—and especially, where necessary, with a proper proportion of fatty matter—he may very safely regulate, by the numbers in the above tables, the quantity of any one which he ought to substitute for a given weight of any of the others—since the theoretical and practical results do not in general very greatly differ.

3. As has been already stated, however, it is not strictly correct that this or that kind of vegetable is more fitted to sustain animal life, simply because of the large proportion of nitrogen or gluten it contains; but it is wisely provided that, along with this nitrogen, all plants contain a certain proportion of starch or sugar, and of saline and earthy matter—all of which, as we have seen, are required in a mixture which will most easily sustain an animal in a healthy condition; so that the proportion of nitrogen in a substance may be considered as a rough practical index of the proportion of the more important saline and earthy ingredients also.

4. It is very doubtful, however, how far this proportion of nitrogen can be regarded as any index of the fattening property of vegetable substances. If the fat in the body be produced from the oil in the food, it is certain that the proportion of this oil in vegetable substances is by no means regulated by that of the gluten or other analogous substances containing nitrogen. The stock farmer who wishes to lay on fat only upon his animals, must therefore be regulated by another principle. He must select those kinds of food, such as linseed and oil-cake, in which fatty matters appear to abound, or mix, as I have already said, (p. 354,) a due proportion of fat or oil with the other kinds of food he employs.

* Both out in Sower.

But large quantities of fat accumulate in the bodies of most animals, only when they are in an unnatural, and, perhaps in some measure, an unhealthy condition. In a state of nature there are comparatively few animals upon which large accumulations of fat take place. A certain portion, as we have seen, is necessary to the healthy animal; but it is an interesting fact, that as much as is necessary to supply this is present in most kinds of vegetable food. In wheaten flour it is associated with the gluten, and may be extracted from it after the starch of the flour has been separated from the gluten by washing with water, as already described (pp. 40 and 45.) In so far, therefore, as this comparatively small necessary quantity of fatty matter is concerned, the proportion of nitrogen may also be taken, without the risk of any serious error, as a practical indication of the ability of the food to supply the natural waste of fat in an animal which is either growing in general size only, or is only to be maintained in its existing condition.

While, therefore, it appears from the study of the principles upon which the feeding of animals depends, that a mixture of various principles is necessary in a nutritive food, it is interesting to find that all the kinds of vegetable food which are raised, either by art or by natural growth, are in reality such mixtures of these several substances—more or less adapted to fulfil all the conditions required from a nutritious diet, according to the state of health and growth in which the animal to be fed may happen to be.

An important practical lesson on this subject, therefore, is taught us by the study of the wise provisions of nature. Not only does the milk of the mother contain all the elements of a nutritive food mixed up together—as the egg does also for the unhatched bird—but in rich natural pastures the same mixture uniformly occurs. Hence, in cropping the mixed herbage, the animal introduces into its stomach portions of various plants—some abounding more in starch or sugar, some more in gluten or albumen—some more in fatty matter—while some are naturally richer in saline, others in earthy constituents; and out of these varied materials the digestive organs select a due proportion of each and reject the rest. Wherever a pasture becomes usurped by one or two grasses—either animals cease to thrive upon it, or they must crop a much larger quantity of food to supply from this one grass the natural waste of all the parts of their bodies.

It may indeed be assumed as almost a general principle, that whenever animals are fed on one kind of vegetable only, there is a waste of one or other of the necessary elements of animal food, and that the great lesson on this subject taught us by nature is, that by a judicious admixture, not only is food economised, but the labor imposed upon the digestive organs is also materially diminished.—*Johnston's Elements of Chemistry and Geology.*

AMERICAN FACTORY GIRLS.—In one of the factories of Maine recently, the proprietors reduced the wages, whereupon there was a general determination to strike, and as they were obliged to give a month's notice before quitting work, they have in the meantime issued a circular to the world at large in which is the following interesting paragraph:—
“We are now working out our notice, and shall

soon be without employment; can turn our hand to most anything; don't like to be idle—but determined not to work for nothing, where folks can afford to pay. Who wants help? We can make bonnets, dresses, puddings, pies and cakes, patch, darn, knit, roast, stew and fry, make butter and cheese, milk cows, feed chickens, hoe corn, sweep out the kitchen, put the parlor to rights, make beds, split wood, kindle fires, wash and iron, besides being remarkably fond of babies; in fact, can do anything the most accomplished housewife is capable of, not forgetting the scoldings on Mondays and Saturdays. For specimens of spirit, will refer you to our overseer. Speak quick. Black eyes, fair foreheads, clustering locks, beautiful as Hebe, can sing like a seraph, and smile most bewitchingly. An elderly gentleman in want of a good housekeeper, or a nice man in want of a wife—willing to sustain either character; in fact, we are in the market! Who bids? Going—gone—gone! Who's the lucky man?"

HOME MADE GUANO.

It is not, perhaps, generally known that the deposits of the hen-house, when suffered to accumulate for several years, without exposure to wet, are very nearly of the same nature as the African and Peruvian guano, of which so much has been said. It is concentrated and caustic manure, and should never be applied to crops without being largely diluted with loam or some other substance, to reduce its strength by diffusion, as it will invariably prove detrimental, if not destructive in its effects. If it be thrown into a heap with six times its bulk of muck, or of good loam, and moistened with water, it will be found highly efficient in promoting the growth and healthy development of any plant to which it may be applied; but it should never be used in its raw and caustic state. A few bushels of this manure, properly diluted and prepared, will be found to produce the results secured by a vastly larger amount of the best stable or barn-yard manure. For vines and garden vegetables it is altogether unsurpassed.

In a recent discussion upon the profits of poultry, evidence was adduced by two or three persons, that the manure from the hen-house produced better results on crops than any other fertilizer used on the farm. In one instance, where about one hundred fowls were kept, sand—mere granular sand—was scattered plentifully on the floor, and upon which the droppings fell. Two or three times a week the surface of this was carefully swept, gathering up a portion of the sand with the droppings and depositing the whole in barrels. In the spring this was in the most convenient form to be taken to the fields and applied to the hills where corn was to be planted, and on a large field where excellent barn-yard manure was applied at the rate of twenty ox-cart loads, or about eight cords, per acre, the portion where a single handful of the home-made guano had been applied was altogether

stouter, and the corn earlier and more sound. But, independently of this source of profit from fowls, the discussion to which we refer afforded satisfactory proof to us, that no product of the farm yields a better profit than its fowls.

HOW APES CATCH CRABS.

A traveller in Java relates the following amusing scene, which he witnessed in the company of some of the natives:

After walking close up to the old campaign, they were upon the point of turning back, when a young fellow emerged from the thicket, and said a few words to the mandoor. The latter turned with a laugh to Frank, and asked him if he had ever seen the apes catch crabs. Frank replied in the negative, and the mandoor taking his hand, led him gently and cautiously through the deserted village, to a spot which the young fellow had pointed out, and where the old man had formerly planted hedges, rendering it an easy task for them to approach unobserved.

At length they reached the boundary of the former settlement—a dry, sandy soil, strip of beach, where all vegetation ceased, and only a single tall pandanus tree, whose roots were thickly interlaced with creeping plants, formed as it were the advanced post of the vegetable kingdom. Behind this they crawled along, and cautiously raising their heads, they saw several apes, and at a distance of two or three hundred paces, who were pertly looking for something as they walked up and down the beach, while others stood motionless.

It was the long tailed, brown variety, and Frank was beginning to regret that he had not his telescope with him, to watch the motions of these strange beings more closely, when one of them, a tremendous large fellow, began to draw nearer to them. Carefully examining the ground, over which he went with all fours, he stood at intervals to scratch himself, or to snap at some insect that buzzed around him.

He came so close that Frank fancied that he must scent them, and give the alarm to the other monkeys, when suddenly passing over a little elevation covered with withered reedy grass, he here discovered a party of crabs, parading up and down on the hot sand. With a bound he was amongst them, but not quick enough to catch a single one; for the crabs, though apparently so clumsy, darted like lightning into a quantity of small holes or cavities, which made the ground here resemble a sieve, and the ape could not thrust his paws after them, for the orifice was too narrow.

The mandoor nudged Frank gently, to draw his attention, and they saw the ape, after crawling once or twice up and down the small strip of land, and peeping into the various holes, with his nose close to the ground, suddenly seating himself very gravely by one of them, which he fancied most suitable. He then brought round his long tail to the front, thrust the end of it into the cavity, until he met with an obstacle, and suddenly made a face which so amused Frank, that he would have laughed loudly, had not the mandoor raised his finger warningly—and directly the ape drew out his extraordinary line with a jerk. At the end of it, however hung the desired booty, a fat crab by one of its claws, and swinging it round on the ground with such vi-

olence as to make it loose its hold, he took it in his left paw, picked up a stone with the other, and after cracking the shell, devoured the savory contents with evident satisfaction.

Four or five he thus caught in succession, on each occasion when the crab nipped him, making a face of heroic resignation and pain, but each time he was successful, and he must have found in the dainty dish, and the revenge for the nip, abundant satisfaction for the pain he endured, or else he would not have set to work again so soon.

Thus then the ape quite engaged with the sport, and without taking his eyes off the ground, had approached to within about twenty paces of the party concealed behind the pandanus tree. Here, again, the ground was full of holes, and looking out the one he conjectured to be the best, he threw in his line once, and probably felt that there was something alive within, for he awaited the result with signs of the most eager attention.

The affair however lasted longer than he anticipated; but being already well filled by his past successful hauls, he pulled up his knees, laid his arms upon them, bowed his head, and half closing his eyes, he assumed such a resigned and yet exquisitely comical face, as only an ape is capable of putting on under these circumstances.

But his quiet was destined to be disturbed in a manner as unsuspected as it was cruel. He must have discerned some very interesting object in the clouds, for he was staring up there fixedly, when he uttered a loud yell, left hold of his knees, felt with both hands for his tail, and made a bound in the air, as if the ground under him was growing red hot. At the end of his tail, however, hung a gigantic crab; torn with desperate energy from his hiding place, and Frank, who could restrain himself no longer, then burst into a loud laugh.

The mandoor at first retained his gravity; but when the ape, alarmed by the strange sound, looked up and saw men, and then bounded off at full speed, with his tormentor still dangling at the end of his tail, the old man could no longer refrain either, and they both laughed till the tears ran down their cheeks.

The ape, in the meanwhile, flew across the narrow strip of sand, followed by all the others, towards the jungle, and in a moment after, not a single one was visible.

WINTER SHELTER FOR ANIMALS.

Solomon says—"A righteous man regardeth the life of his beast." It is remarkable, that on a very large majority of our farms, far less attention is paid to the comfort of our domestic animals during the long period of their confinement during the winter months, than the well-known humanity of our farmers, in other matters, would seem to insure. LIEBIG, the distinguished German chemist says that our clothing is an equivalent for food; and every discerning and reflecting person must have received a very striking and impressive corroboration of the truth of the observation in the plain fact that an animal comfortably sheltered, and provided with litter or bedding, consumes, during winter, less food by nearly one-half than an animal of the same size and kind will require if uncared for

and exposed. We have frequently been surprised and shocked by what appear to be an unmerciful regardlessness of the comfort and health of their domestic animals, particularly their young stock.

Every correct farmer will study the comfort of every animal under his care—not only from a common principle of humanity, which is, or should be, instilled into him by the gentle and humanizing character of his pursuits, but from a healthy and laudable regard for his own interests. As a facetious writer once said, "misery never yet fattened any one, and cold and hunger are miserable bed-fellows." Good barns, comfortable sheds, close "cotes," for sheep and swine to go to when they please, are among the most elegant embellishments of which a homestead, in a rural districts can possibly boast.

GARDEN SEEDS.

There is a matter to which I wish to call the attention of the public, and especially that portion of it who deal in garden seeds; and that is, the bad quality of many of the kinds that they send round among us. At five cents a paper, which, on an average contains each not more than a table spoonful, they can well afford to furnish us with the very best of new seeds, indued with full and active vitality. But I am sure some do not, and I hazard the remark that none take the pains they ought to take. The loss of 5, 10 or 15 cents is not much; but that is by no means the whole loss. There is the loss of the labor of preparing the ground, of sowing the seed, of much of the manure used, and of the expected crop. And there is the vexation, which, in this world, which is so full of vexations, ought not to be inflicted upon us, if seed-sellers can well help it. The complaint does not proceed from one only, but from many.

There is hardly any seed which does not lose a portion of its vitality; some lose all if kept over more than one winter. It is pretty well known that seed-sellers take back in the fall the seed unsold in the preceding spring, and the suspicion is rife among us that the seed taken back is offered again, and perhaps a third or fourth time. The papers bear no date of the year when the seed was raised; and why do they not?

I fear the seed-sellers do not take sufficient care to put up only the best seed. In all cases, where the plant is biennial, they should use none but large healthy roots; and when it is umbeliferous, like the parsnip, or branching, like the beet, they should put up none but such as is borne on the central umbels and the principal branches. If they were to remove the inferior umbels, (the umbels only,) and the tops of the inferior branches, at the time of blossoming, or before, the umbels and branches left would bear better seed; and those removed, would probably, if left, have borne only abortive seeds.

It has been said that cabbage seed, raised from cabbage stalks, the head being removed, seldom produce plants that head well. So reason teaches.

And it has been said also that squash and pumpkin seeds, taken from the stem end, are more apt to produce fruit similar to the parent than those taken from the blossom end. It is well worth while

to ascertain if this saying is correct. Reflection would probably suggest a reason why it is so.

This spring, more complaint has been made of the bad quality of parsnip and onion seeds than of any other; but the best beds show many vacancies.

Doubtless the failure of many seeds is due to the ignorance or carelessness of the sower. It will take but a few lines to remark that, in a dry season, covering the seed sown, for three or four days, with a board or a piece of old carpet, will sometimes cause it to vegetate, when otherwise it might not.

Can you, Mr. Editor, give a list of the seeds which lose their vitality soonest, and of other seeds which retain their vitality longest? Honest seed-raisers, and all are honest, for aught I know, would be glad to learn.

Yours, &c.,
Keene, N. H.

S. HALE.

We fully agree with our correspondent, that there is great need of improvement in the quality of garden seeds. We have long been aware that if there is anything in which the public are humbugged, it is in garden seeds. But the cause must not be laid to the established seed dealers; it belongs wholly and exclusively to the purchasers. They require cheap seeds, and always buy of those who sell the lowest, and of course, they get them; for no honest, upright seedsman could supply pure fresh seeds at the unusually low prices at which they are now sold.

The truth is, the mass of the people buy garden seeds as they would a pound of sugar or a bushel of corn; the cheapest always finding the most customers. The standing of the seedsman is no consideration, and the seeds of an unknown dealer are just as readily taken as those from the merchant who is well known, and has a reputation to lose. The competition among dealers, and the eagerness to secure customers, has lowered prices, and as they are below what fresh seeds can be raised for, they must of course be adulterated to afford a living. The dishonest seedsman, if there are any such, must pursue this course, or purchase, hap-hazard, any seed offered for sale, of which there is always an abundance, without knowing anything about them. Probably not one in ten of those who buy seeds are aware that the best seedsmen, who can be relied upon, have their seeds raised expressly for them, and often furnish the stock, or know that it is pure; it is the only way they can be certain of their genuineness. The only remedy is, therefore, to deal with *first rate* houses, with men who are known, and to be willing to pay a fair price for a pure article. If, however, they must be had at a low price, purchasers must expect to have them mixed with old seeds; for it is the only way in which the dealer can compete with the cheap seedsman. Our advice is, to buy nothing in the way of seeds, plants or trees, because they are cheap.—*Hovey's Magazine.*

SUPERPHOSPHATE OF LIME AS A FERTILIZER.

We were induced, last spring, on the recommendation of a friend, to use some superphosphate of lime upon some corn which we were planting. In order to make the experiment fairly, we left one row of corn without any of this fertilizer. The rows in which we placed the superphosphate came up the first, grew the rankest, and looked the best all through the season. A week ago to-day we harvested the crop, and, as all the piece was equally

manured before the superphosphate was applied, and had equal culture, we give the result of our experiment. Gathering and husking the row without superphosphate, we found they weighed 36 pounds, not ten ears of which were hard or perfect, having suffered from the frost some four weeks ago, while the *next* was perfectly matured and the ears weighed 60 pounds. We are convinced that the superphosphate saved our entire crop of corn, although we used only a table-spoonful in a hill. What will our neighbor of the *New England Farmer*,—which is one of the best agricultural and family newspapers in the world,—say to this?—*Chelsea Telegraph.*

REMARKS.—Your neighbor of the *N. E. Farmer* thinks the experiment a very favorable one, and would advise you to continue it next year, and see if the result will be the same. We have raised between fifty and sixty bushels of corn to the acre, this year, where only a handful of superphosphate was applied,—but the land was heavily manured last year.

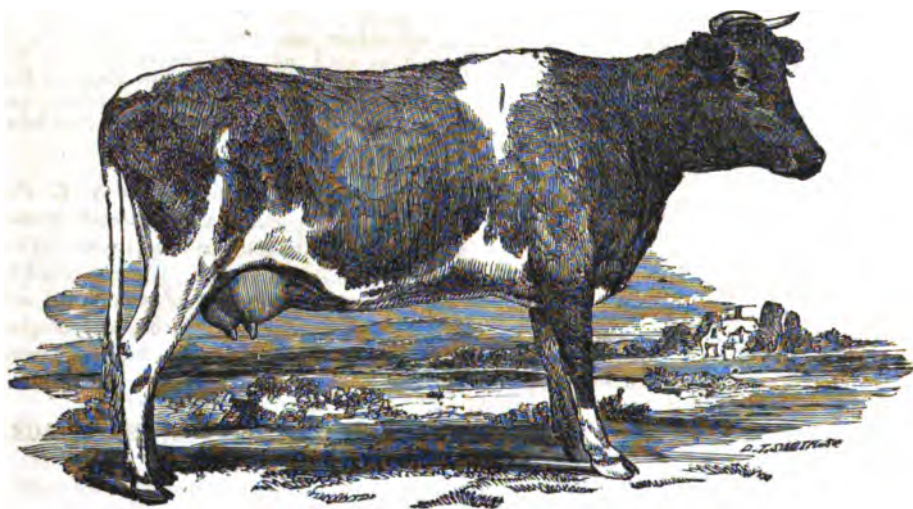
THE YIELD OF LESS THAN AN ACRE OF GROUND.

I see going the rounds of the papers the products of a two-acre farm, amounting after nine years' preparation to the annual sum of \$133,20: and the writer concludes he "will have his reward, if the account he gives, will stimulate others to do the like out of nothing." To add a further stimulus I give the following account of the productions of a household containing but 139 perches and 83½ feet. At least one-third of this is taken up by house and out-buildings, and about one-third of the balance too steep for cultivating anything but grass and trees. It came into my possession four years ago, with the portion now cultivated stripped of its soil by grading to fill up terrace walls. There are three of these, 5 to 8 feet high. It has produced during the past season:

306 quarts of Strawberries,	20 cts.,	- - -	\$61,60
60 bunches Asparagus,	5 cts.,	- - -	3,00
200 lbs. Grass,	\$1	- - -	200
38 quarts Gooseberries,	8 cts.,	- - -	3,04
16 quarts Currants,	6 cts.,	- - -	96
20 quarts Peas,	8 cts.,	- - -	1,60
27 quarts Raspberries,	15 cts.,	- - -	4,05
10 bunches Rhubarb	6 cts.,	- - -	60
6 quarts Cherries,	10 cts.,	- - -	60
5 bushels Grapes,	\$2	- - -	10,00
10½ bushels Peaches, extra,	\$2	- - -	21,00
4½ bushels Peaches, common,	50 cts.,	- - -	2,25
Grass, second crop,	- - -	- - -	1,00
470 Peach trees, 1 year, bud. fine,	8 cts.,	- - -	37,60
100 Gooseberry trees,	5 cts.,	- - -	5,00
1½ bushels Onions,	75 cts.,	- - -	1,12
2 lbs. Hops,	40 cts.,	- - -	80
8 Gourds,	5 cts.,	- - -	40
12 Grape Vines, 1 year,	10 cts.,	- - -	1,20
Total	- - -	- - -	\$157,48

Every tree, shrub and plant has been set by my own hands—excepting about one dozen and three old peach trees—within the four years, and had my attention only before breakfast and after supper. In addition to my own labor, the whole lot has not received more than 20 days' work during the season, perhaps less.

If the "*New England Farmer*," or any other can beat this, let us hear from them.—ROBERT ARTHURS, *Pitt Township, Alleghany Co., Penn.*—*Western Agriculturist, Pittsburg.*



JERSEY COW, FLORA.

Among the efforts made to introduce better milch cows to our farms, both for milk and for dairy purposes, the *Alderney*, or *Jersey* cows, have taken quite a prominent place; but their possession has not become general; a few enterprising persons, only, having purchased them, who can afford to experiment, and lose, if such should be the result, without having the loss materially affect their other operations. In many cases they have proved excellent, but not in all.

Mr. Lawrence, in his general treatise on cattle, gives as a general description of the cows, that they are light red, yellow, dun, and fawn-colored; short, wild-horned, deer-necked, with a general resemblance to that animal; thin, hard, and small-boned; irregular, and often very awkwardly shaped. He thinks they are among the best milkers in the world, as to quality. He had been assured that an *Alderney* cow that had strayed from her owner, made *nineteen* pounds of butter a week, each of the three weeks she was kept by the finder; and the fact was held so extraordinary, as to be thought worth a memorandum in the parish books. This product however, has been equalled, we believe, by some of the common, or native cows of New England. The reports in the transactions of our country agricultural societies have frequently shown a product of one pound of butter, from *four* quarts of milk.

Before coming to a conclusion of their true value, we think they must become more common on our farms, so as more generally to learn their qualities,

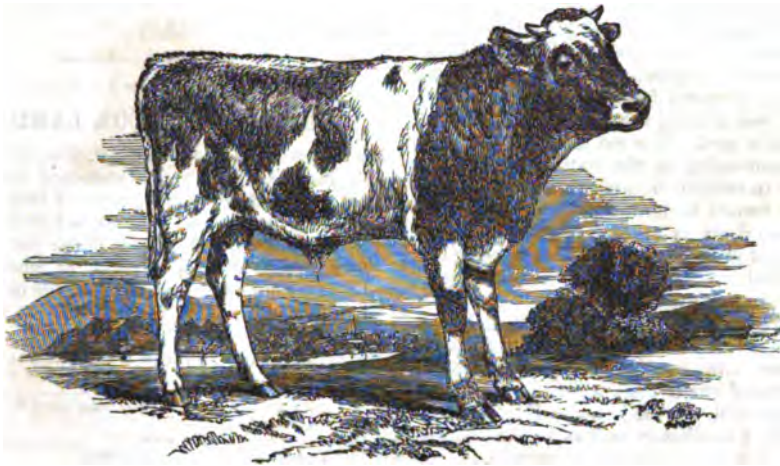
both for milk and beef, and their adaptation to our climate, and pastures. In the meantime, we are happy to express our obligations to those who are willing to breed and test them.

The cow from which the above engraving was taken, is the property of JONATHAN FRENCH, Esq., of Roxbury, who has furnished us the subjoined account of her.

Flora, the Jersey cow, is four years old last September, and weighs nine hundred pounds. She was imported, September, 1854, direct from the Jersey Islands; was then with calf, which was dropped last March.

The largest quantity of milk she has given in any one day, was thirteen quarts. As much of the milk as was required for the use of the family to make up the deficiency of another cow, was reserved and the balance made into butter, giving, for several weeks, *nine to ten* pounds! After calving, she was sick and did not produce the quantity, or quality of milk, which may be expected from her when fully acclimated.

A GREENLAND LADY'S DRESS.—This consists of seal-skin stockings with the fur next to the foot, and of such length as to reach above the knee. Over these is drawn a pair of seal-skin boots, with the fur outside, so that the boots are in truth a seal-skin of double thickness, with the fur outside and inside too. The pantaloons are of seal-skin, something in the form of old-fashioned knee breeches. A jacket of seal-skin, fur inside, fits close to the body. The outer habiliment is a loose jurrah



CZAR, CALF OF THE JERSEY COW, FLORA.

AGE 8 MONTHS. WEIGHT 500 LBS.

of calico. Around the neck is a ruff of dog's fur, but underneath this is a white or black handkerchief tied snug to the neck. The dress when ornamented is quite a handsome one, as it is the best of the bloomer style.

HOW TO CURE HAMS.

As this is about the time when most farmers are preparing their hams, beef tongues, &c., for future use, a few suggestions on the subject will undoubtedly be acceptable.

We would not advise the use of saltpetre in curing meat—it is entirely unnecessary, and it is dangerous. Many of the other suggestions below are valuable:

PORK HAMS.—When the meat is perfectly cold, after being killed, it is ready to be salted. The salt should be of the best quality—solar evaporated, ground fine, is, perhaps, the best kind—and to every pound of it one ounce of fine white sugar should be added. The hams should be laid upon a table or bench, and every part carefully rubbed with this salt; then they should be laid in a dry tub until the next day. The same operation should be repeated every day for four days, taking care to turn the hams in the tub every time they are laid down. After this, the operation may be repeated once every two days for a week, when it will be found that the meat has absorbed sufficient salt to preserve it for family use. After this it may be slightly smoked, or hung up to dry. Hams intended for sale should be once rubbed over with the salt, as described, then placed in a strong pickle. This should be made of the best salt—10 lbs. to the 100 lbs. of pork, with one ounce of sugar to the

pound added, and half an ounce of saltpetre to the ten pounds of salt, all boiled for about fifteen minutes, and the froth skimmed off; it is then set aside to cool. When cold, the hams may be placed in this pickle and left for three weeks. They should then be lifted, hung up for three or four days to drip, and are then fit to be smoked.

For family use, instead of smoking the hams after they are salted and dripped, if they are simply rubbed over with black pepper and hung up for a few days to dry, the meat acquires a very fine flavor. A mild smoky taste may be given to hams without smoking them, by simply smoking the barrels in which they are to be laid down in pickle. This is a good plan, because the taste of the smoke—which some persons like—is given to the meat without discoloring it. Sides of pork should be treated in the same manner as hams laid in the pickle; but for home use, during winter, by merely rubbing the sides with salt every day for a week or ten days, then hanging them in a moderately cool place to dry for use, the meat is much sweeter than that laid down in pickle. This information we have derived from one long engaged in curing pork, and we have satisfied ourselves, practically, of its correctness. The amount of salt for rubbing on the meat does not require to be stated; no person can go wrong by rubbing on too great a quantity. The sugar is used for the purpose of nullifying the bitter taste of the saltpetre, and also that of any *bitterin*—sulphate of magnesia or sulphate of soda—that may be in salt.

BEEF HAMS.—The finest beef hams are made by cutting out the entire bone of the hind-quarter, then rubbing in the salt and sugar, the same as described for pork hams, turning them over and rubbing them every day for one week. After this they are hung up to drip in a cool place for three days.

They are now taken down and rubbed all over, on a table or bench, with some fine salt, black pepper, and cloves, all ground together. About one ounce each of salt and pepper, and half an ounce of cloves, are sufficient for thirty pounds of meat, but the exact quantity cannot be given. No person can go wrong if he rubs every part of the whole surface of the ham with some of this salt and pepper composition. The ham is now fit to be rolled. This is accomplished by rolling it into cylindrical form, swelling it round from the narrow to the thickest end, and hanging it up to dry for about ten days before it is used. It is cut in round slices for frying by commencing at the butt end. A stout cord is used to swill, or tie such hams, and it must be looped or turned under on both sides along the coils of the cord, so as to have every coil firmly bound and held in place when the ham is being cut in slices for daily use. Hams made in this manner are the finest in the world—a luxury.

Smoked beef is to be found in abundance in our markets, but it is a poor eatable of the meat kind in comparison with beef prepared as described. We hope some of our farmers will make some such beef hams this fall for family use. They will not keep in summer weather so well as smoked beef—so it is said—but of this we are not certain.

For the New England Farmer.

REMEDY FOR THE ONION MAGGOT.

DEAR SIR:—I noticed in the *New England Farmer*, a question, asking "What could be done to get rid of the onion maggot?" I will give you my experience. Some few years since, I should think the second or third year of the potato rot, my gardener came to me and told me the onions were being eaten up by maggots at the root; said he had put ashes, and also lime on them, but they did no good. I went to the garden and found, as he said, the roots full of maggots. I then examined the sound ones, and found the joints full of fly-blows, quite a number in each joint close to the main stock; they were then from six to eight inches high. I told the gardener first to water the plants with the watering pot until quite wet, and another to sift the ashes thickly over them; he did so, and saved every one that was left standing. I never had a better crop, and have continued to grow them on the same ground ever since, and have never lost any.

I had a bed of top onions paralled with the others.—I found fly-blows on them, and also where they had hatched and gnawed a circle round just enough to leave a white mark, but the onion tops were too hard for them to penetrate. I then thought, as the potatoes were rotting, I would examine them. I found where the vines were decayed, the roots were full of the same kind of maggots, and where they were not decayed, there were unmistakable marks where they had tried, without success, to gnaw into the heart of the vine.

I noticed that spring that there were vast swarms of slender black flies in the garden, and have no doubt they blew the onions. The currant bushes were also badly handled by them, or some other insect. One of my neighbors soaked a paper of onion seeds and found 40 live maggots on the top of the water, very small, but discernible with the naked eye.

Can you, or any of your correspondents, tell of

any method to destroy the inch worm, green and black, that eats up all the foliage of the currant bushes? They have eaten ours two seasons; the second season the bushes died; there are myriads of them.

Also a cure for mildew on grape vines.

M. C., PAVILION HOUSE.

Montpelier, Nov., 1855.

For the New England Farmer.

FARMING ON POOR LAND.

MR. EDITOR:—In volume 10, No. 28 of the weekly *Farmer*, I gave you a statistical account of the expenses and profits of a piece of land which I had tilled for two years previous, which left me a nett profit of \$8.07. I now send you the amount of another crop, with the expense of raising it, to show that farming *does pay*, even on the hard lands of our hilly town.

	1855.	Dr.
May 7—8. To 1½ days' labor with boy and oxen to plow and harrow, - - - - -	\$3.00	
May 8. To 1 bushel wheat, sown, - - - - -	2.50	
May 14. To 1 day's labor with boy and oxen to plow and harrow, - - - - -	2.00	
May 14. To 2 bushels barley sown, - - - - -	1.75	
May 14. To 4 bushels clover seed in chaff, - - - - -	.50	
May 14. To 6 qts. herdsgrass seed, - - - - -	.75	
May 14. To 30 lbs. guano and 2 bushels ashes sown, - - - - -	1.30	
Aug. 14. To 1 day's labor mowing barley and cradling wheat, - - - - -	1.50	
Aug. 16. To 1 day's labor, binding wheat and getting in barley, - - - - -	2.25	
Aug. 21. To getting in 33 stooks wheat, - - - - -	.50	
Oct. 11. To threshing 25 bushels grain at 1s. per bushel, - - - - -	4.17	
Total expenses in 1855. - - - - -	\$30.22	

	1855.	Cr.
By 8 bushels of wheat at \$2.50 per bushel, - - - - -	\$20.00	
By 17 bushels barley, at 87½ cts per bushel, - - - - -	14.87	
To 1 ton wheat straw, at \$6 per ton, - - - - -	6.00	
To ½ of ton of barley straw, at \$9 per ton, - - - - -	6.75	
Add profits on previous crops, - - - - -	8.07	
	\$55.69	

Deduct expenses

	30.22	
Leaving a balance in my favor, of - - - - -	\$25.47	

Showing a fair remuneration for the use of the land. I had a small crop, owing to the heavy rains during the month of July, the land being naturally wet and heavy.

I ask you to publish the above to show to our brother farmers that farming *does pay*, even with ordinary crops.

HARVEY BARBER.

Warwick, Nov., 1855.

NUTRIMENT IN THE APPLE.

With us (says the editor of the *Albany Journal*) the value of the apple, as an article of food, is far underrated. Besides containing sugar, mucilage and other nutriment matter, apples contain vegetable acids, aromatic qualities, &c., which act powerfully in the capacity of refrigerants, tonics and antiseptics; and when freely used at the season of mellow ripeness, they prevent debility, indigestion, and avert, without doubt, many of the "ills that flesh is heir to." The operators of Cornwall, England, consider ripe apples nearly as nourishing as bread, and far more so than potatoes. In the year 1801—which was a year of much scarcity—apples, instead of being converted into cider, were sold to the poor; and the laborers asserted that they could "stand their work" on baked apples, without meat,

whereas a potato diet required meat or some other substantial nutriment. The French and Germans use apples extensively, as do the inhabitants of all European nations. The laborers depend upon them as an article of food, and frequently make a dinner of sliced apples and bread. There is no fruit cooked in as many different ways in our country as the apple, nor is there any fruit whose value as an article of nutriment, is as great, and so little appreciated.

For the New England Farmer.

SPECIAL MANURES.

What scientific agriculture will ultimately do for farmers, time will show; what it *has* done, may be seen on the farms of many of the most inveterate opponents of the improved agricultural movement.

Let any one consider the amount of meadow mud, muck and similar material daily used on New England farms, and he will find that the manurial resources of farmers have been more than doubled; even those persons who leave their manure to be dried by the sun and washed by the rain, now believe they decidedly gain by such admixtures.—Thousands, whilst they studiously condemn all agricultural newspapers, lectures and books, mix the deposits from pond and road-side, with the cattle droppings, because neighbor A or B, who do derive information from such sources, does so and is benefited.

But even this simple operation is not fully understood in its scientific bearings. I will not enter into the detailed analyses of peat and pond mud; it is enough to know that it is largely composed of water and carbonaceous matter, and some valuable salts (mineral matter) in a crude state. That so long as it is submerged in water, no change can take place in its constituent parts which will set free the harmless and valuable portions, and render innocuous the hurtful.

We will suppose we have the mud dug, and treat of the best method of using it, and some of the results. When first dug it is as soft as cheese, and full of water; to remove it then to the barn-yard necessitates the removal of a large quantity of water; do we need this water? No—because we wanted the peat to be sponge-like to absorb the surplus water of the manure, which it cannot do if already saturated.

A winter's frost or summer's sun settles that, breaks it, expands it, and leaves it light and dry; now put it at the bottom of the manure heap, and we have an absorbent that will not only take up the refuse water, but will hold it till wanted. Postponing the consideration of the chemical components of the peat, now saturated, let us consider how most farmers will use the pile of compost accumulated during the year; the compost made of horse, cow and pig feces, perhaps some night soil, and the before mentioned peat. In a section of country like this, each farm will have some upland, and some reclaimed meadow, all or a part of which will be in grass; the so-called good farmer, during the frozen weather, will haul out his manure and leave it in piles on his grass land, ready to be spread in the spring as a top-dressing. He knows that so piled and spread, it will lose some of its value by evaporation, but he knows such work can be properly done at no other time, from the tender state of the ground, and too great hurry of work. If he is

as good a farmer as we have supposed, he will dress this land with not less than eight or ten cords per acre, to be renewed yearly, or less often, as his experience may deem best.

Let us now ascertain the benefit this compost thus made will do his meadow land. We know, to a moral certainty, it will give him the next summer from two to three tons of hay to the acre, while the same land not manured will only give a ton; no one doubts the wisdom of his getting the largest possible return from his acre, consistent with an economical outlay, and he tells us that the hauling and mixing of this compost has been done at odd jobs, and really cost but little; the question of cost we will reserve for the present, and inquire what has been the scientific result of his labor.

Peat meadow (i. e. reclaimed meadow), is composed of peat which has been drained of its superfluous water and top dressed with more or less gravel. The water, scientifically, flooded the peat, kept out the air, which by means of its oxygen would have affected the mineral matters in the mud, and would have so acted upon them chemically as to make them (technically) sweet, and capable of contributing towards a healthy vegetation; the gravel served to give greater strength and consistency to the mud, and increased the drainage, by the admixture of its stones and larger particles, and also furnished some lime, potash and silica and other ingredients to the active carbonic acid of the peat itself. Now what is the peat?

It is a body composed of about 85 per cent. of water, 14 per cent. of carbonic acid and ammonia, and 1 per cent. of lime, potash, &c., the water and carbonic acid being, as we see, in excess, the lime, &c., small, the ammonia and phosphate of lime very small in amount. The gravel will afford a large amount of silica, a small portion of lime, differing in that respect according to the locality of the gravel, and little or no ammonia or phosphate of lime. Now without entering into the discussion whether ammonia or phosphate of lime is the more important agent in vegetable growth, let us assume they are both necessary, because both have been found, in all carefully tried experiments, to conduce to the development of vegetation; if we examine a number of analyses of plants, we shall find that in all cases water and carbonic acid are the largest contributors to their structure, and these we have to an inexhaustible amount in the peat; but we no less surely find that these two agents, alone, can never produce a vegetation able to sustain animal life.

Having this starting point, we see that by the same analyses, plants in the aggregate take a very large amount of various mineral matters from the earth; a ton of hay, for instance—280 lbs. of water, 1600 carbonaceous matter, 21 1-10 lbs. lime, 26 lbs. potash, 32 7-10 lbs. ammonia and phosphate of lime; and by comparing these amounts with the contents of an acre of peat, we see that a few years would exhaust the peat, even if we could squeeze all out of it which it contains, an impossible process, therefore we feel the necessity of supplying these ingredients to the meadow land to ensure a large crop of hay; and inasmuch as the farmer gets the large amount of hay year after year, it is evident to superficial reasoning that he must have supplied these mineral matters; he would seem then to have acted scientifically—has he? No, because though he may have supplied the ingredients in

whole or in part, he has not supplied them according to any definite system, or with the greatest economy; his top-dressing could not have cost him less than \$25 per acre, and he got an increase of 1½ tons of hay, or \$30 in return. If we can show him that this end could have been gained for \$9, he would admit that he lost \$17 by the operation, which the same scientific reasoning will show to be a most unscientific operation.

If any one has been interested enough to follow thus far, it will be easy to show the method of operation hereafter.

R. M. C.

Lexington, Nov. 25, 1855.

For the New England Farmer.

"BUTTER STOCK."

Can you, Mr. Editor, inform me whether or not any of this famous stock is now to be had? For several years last past, they have been trumpeted abroad, in every possible form, up to the time of the great National Show, in your city, and since, until the Devons of Middlesex had become, in the minds of readers of newspapers, as distinct a class of animals as any other. If my recollection is right, there has been a proposal to sell all these animals, by their proprietor, that others may be benefited thereby. Whether or not such sale has been made, I am not advised. I have looked in vain for an account of it. If people believe what has been averred about these animals—that a gallon of their milk would produce a pound of butter, in the month of October, and a gallon and a half at all other seasons of the year—this being twice as well as may be expected of other good stock—then it must be that they would sell for prices corresponding.—I expected that individual animals would have run up to two, three and five hundred dollars. Certainly cows that will give milk of this quality, and make certain that their offspring will do the like, would be worth these prices. More than this, he who has had the sagacity to distinguish and grow up such a stock, should be worthy of distinguished remembrance. I am well satisfied of the butter-making qualities of the Jersey animals, kept by Mr. Motley, Mr. Reed and Mr. Henshaw; and that these animals will produce milk that will yield two pounds of butter a day, when fed in the best manner. These are the best "butter stock" I have ever seen. Their looks show their ability. But that the plump Devon can be made to do this, I have yet to learn. Possibly, under very peculiar circumstances, milk can be stripped from them, four quarts of which will yield a pound of butter. But before I can fully credit such statements, let them be backed by never so strong arguments, my name will cease to be

THOMAS.

Nov. 29, 1855.

THE VALLEY FARMER.—E. ABBOTT, Esq., late Editor and Proprietor of the *Valley Farmer*, published at St Louis, has sold the establishment to NORMAN J. COLMAN, Esq., of that city. Mr. Abbott, who has long done good service in the cause, will remain as Associate Editor. Mr. Colman announces that he shall devote his time to the interest of the *Farmer*, and shall introduce important improvements into the paper.

For the New England Farmer.

TO THE "PEASANT BARD."

How art thou, friend, this autumn weather—
In spirits—light, as lightest feather?
From what we learn of ye, we gather,

Thou goest it prime;
And if, perchance, we meet together,
We'll have a time.

Thou young "potato-digging" loon!
How cam'st thou by so rich a boon?
Namely, the Muse's golden spoon,

At which folks stare;
One wouldn't have thought it—an' such shoon,
As thou dost wear!

Moreover, what dost feed upon?—
We do conjure thee—tell us, man;
And eke, what stream from Helicon

Flows down thy gullet?
Then, swifter than Ahimsa's ran,
Here's haste, our skillet.

But lately 'twas, we chanced to see
A rare production, penned by thee;
And heard it asked, respecting ye,

In plain set terms,
"Have we up in the hill country,
'Mongst us a Burns?"

Quite glad indeed, were we, to hear
Such joyful news, spread far and near;
Though aged quite, and as we fear,
Laid on the shelf,
Thus introduce, in method queer,
Our humble self.

All summer long, have we been toiling,
About the farm, and delving, molling,
'Twixt rain and sunshine, dripping, broiling,
To gain a living;
One's system needs a little oiling,
Against Thanksgiving.

November's howling "o'er the lea,"
Disrobing plant, and flower and tree;
The storm-king's driving fast and free,
Young childhood's wonder,
And our poor bardship's for a spree
A "Doesticks Bender."*

Flie! on those "melancholy days,"
That Bryant sings in sweetest lays;
However bright the poet's bays,
Or nobly worn,
Methinks, such times the dapple greys
Might serve one's turn.

We've chanted in our Harvest Home,
And made all snug for months to come;
Are ready for the fife and drum,
Of social chat,—
Discussions—Lectures—Lyceum,
We're in for that.

* * * * *
Farewell! my brother of the plow—
My blessing, take it—even now;
Such welcome would I likewise show
To thee and thine,
As manna welcomed was by Jew,
In auld lang syne.

R. E. C.

Stockbridge.

* A "Doesticks Bender,"—alluding to a humorous article in the *N. Y. Evening Post*, entitled "Doesticks on a Bender."

WHY BUTTER IS DEAR.—Is the following, from a New York city paper, true or fabulous?

"There is a fine pasture all over the country now, and the price of butter ought to be down to a shil-

ling a pound. Why isn't it? Because the women and girls don't know how to make it. For twenty years past the girls' butter-making education has been sadly neglected. They can play the piano, but cannot churn; can dance, but cannot skim milk; can talk a little French, but don't know how to work out the buttermilk. The women who made the butter in Westchester, Dutchess and Orange Counties twenty years ago, are passing away, and there are none to take their places. That's why butter is high."

For the New England Farmer.

PORTRAITS FROM THE FIELD AND FARM-YARD.

BY WILSON FLAGG.

THE CHICKADEE, OR BLACK CAP TITMOUSE.

There are but few individuals who have spent their winters in the country who would not agree with me that, to the lively notes of the Chickadee we are indebted for a great part of the cheerfulness that attends a winter's walk. Though he is not reckoned among the singing birds, there is a variety in his notes, uttered at different times, which, if repeated in uninterrupted succession, would form one of the most agreeable of woodland melodies. The sounds from which he has derived his name seem to be a species of call-notes, and are probably designed by nature to enable these little birds, while scattered singly over the forest, to signalize their presence to others of their own tribe. Hence it may often have been observed, that when this call is rapidly repeated, a multitude of these birds will immediately assemble around the one that gave the alarm. When no alarm is intended to be given, the bird simply utters these notes occasionally, as he passes from one tree to another. He is probably accustomed to hearing a response, and if one is not soon heard, he will reiterate his call until it is answered; for as these birds do not forage the woods in flocks, this continual conversation or hailing is carried on between them to satisfy their desire for one another's company.

These call-notes, with which every one is familiar, are very lively in their expression, with a mixture of querulousness in their tone that renders them the more pleasing. The Chickadee, at other times, utters two very plaintive notes, which, unlike those of the generality of birds, are separated by a regular musical interval, making a *fourth* on the descending scale. They slightly resemble those of the Pewee, except that the latter are on the ascending scale, and they are often supposed to come from some other bird, so entirely different are they from the common note of the Chickadee. I have never been able to ascertain the circumstances under which the bird repeats this plaintive strain; but I know that it is uttered both in summer and winter. In the early part of summer, these birds are addicted to a very low, but pleasant kind of warbling, greatly varied but indistinctly enunciated, and which wants only a sufficient loudness and distinctness to entitle the bird to high merit as a songster. This warbling does not seem to be intended to cheer his partner, but rather as a sort of soliloquizing for his own amusement. If such notes were uttered by the young of a singing bird, we might suppose it to be taking lessons in music, and that these were some

of its first attempts. I have often heard a similar kind of warbling from the Baltimore Oriole.

The Chickadee is one of the most lively of our birds, and on account of his permanent residence with us, one that would be sadly missed if his race were to become extinct. Though not a song-bird, he is a lively chatterer and an agreeable companion; and as he never tarries long in one place, he never tires one either by his presence or his garrulity.—We associate him with all our pleasant winter walks, in the orchard or in the woods, in the garden, or our immediate enclosures. We have seen him on still winter days, flitting from tree to tree in the garden and orchard with the most lively motions and engaging attitudes, examining every twig and branch, winding over and under and in and out, and then with a few rapid notes, hopping to another tree to go through the same pleasant evolutions. Nothing can exceed either his cheerfulness or his industry, of which he might most truly be made emblematical. Even those who are confined to the house are not excluded from a sight of these little birds. In the country one cannot open a window on a pleasant winter's morn, without a greeting by them from the nearest tree in the garden.

The frequent companions of the Chickadee are the common Creeper and the downy or speckled Woodpecker; but the Woodpecker is a more restless bird, and seldom gives the branches of the trees so thorough an examination as the Chickadee. The former searches for certain grubs that are concealed in the wood of the tree; he examines those places only in which they are likely to be found, listens for their scratchings, bores the wood to obtain them, and then flies off. But the Chickadee looks for insects on or near the surface, is never weary or satisfied of his examinations, and does not confine his search to the branches of trees. He examines the fences, the under part of the eaves and the clapboards of all buildings for crysalids and cocoons, and destroys in the course of his foraging, many an embryo moth and butterfly, which would become the parent of noxious larvae. Hence there is probably no other American bird that destroys in the course of the year so large a quantity of insects, as he continues his operations in the winter, when there is but a small proportion of any other food to be obtained, and he is obliged by necessity to be very diligent in his work.

The different species above named often get assembled in large numbers upon one tree, and meeting with more company than is agreeable when they are hungry, they will often on these occasions make the wood resound with their noisy disputes. They may perhaps have been gathered together by some accidental note of alarm, and on finding no particular cause for it, the noise that follows reminds one of the extraordinary vociferation with which young men and boys conclude a false alarm of fire in the early part of the night. These birds, though evidently social, are not gregarious, and seem never without vexation to endure the presence of more than one or two companions. Those species most generally associate in flocks whose food is abundant in particular spots, and those which perform regular migrations. But the Chickadees and Woodpeckers can seldom obtain more than one or two morsels from the same tree, and find it, therefore, most convenient to keep themselves separate from their kindred.

NUTRIMENT IN VARIOUS SUBSTANCES.

Animal food, taking bulk for bulk, is assumed as being far more nutritious than vegetable. But when weight is placed in juxtaposition with weight, it is seen to fall far below several farinaceous and leguminous substances. The following tabular exhibit shows what chemical analysis has made apparent on this important topic:—

100 lbs. wheat contain.....	85 lbs. nutritious matter.
" rice.....	90 "
" rye.....	80 "
" barley.....	83 "
" beans.....	89 to 92 "
" peas.....	98 "
" meat, average.....	35 "
" potatoes.....	25 "
" beets.....	14 "
" carrots.....	14 "
" greens and turnips.....	8 "
" bread.....	80 "

It hence appears that a pound of bread contains more than twice as much nutriment as a pound of meat, and that a pound of peas or beans, more than two and a half times as much as a pound of meat. Seven pounds of potatoes are also, it appears by this analysis, equal in nutritive matter, or the power of sustaining life, to five pounds of animal food.

"Food taken into the stomach, is there digested, and the nutritive portions of it converted into blood, which is conveyed by the proper vessels to every part of the system for its nourishment and support. Any portion of it which, from any cause, escapes the digestive process, and those parts of it which are not adapted to nourish the animal body, are cast off as excrementitious." In eating, repletion should always be avoided. "Most of the chronic diseases, the infirmities of old age, and the short periods of the lives of Englishmen," says Dr. CHEYNE, "are owing to over-tasking the digestion."

"I tell you honestly," said the celebrated ABERNETHY, "what I think is the cause of the complicated maladies of the human race; it is their gormandizing, and stuffing and stimulating their digestive organs to excess, thereby producing nervous disorders and irritation."

SHAKESPEARE, in one of his plays—"As you like it"—has beautifully exemplified the good effects of abstemiousness and abstinence—the only sure safeguards of health against morbidity and disease:—

"Though I look old, yet am I strong and lusty;
For in my youth I never did apply
Hot and rebellious liquors in my blood;
Nor did not with unbalshful forehead woo
The means of weakness and debility.
Therefore, my age is a lusty winter—
Frosty, but kindly."

WOOL.—For the last three weeks a very considerable amount of wool has been sold in this place, at fair prices. Mr. Brumbaugh informs us he has bought, this season, about 24,000 lbs. Mr. Cherry Holmes has also bought over 17,000 lbs. The pri-

ces paid is from 25 to 43 cents, owing to the quality or condition it is in. Mr. Wm. Lewis, of Berlin township, sold in this place, wool from this year's clip to the amount of \$994.59. He got over 40 cents a pound, while one of his neighbors sold wool equally as good as his for 38 cents, after hauling it down to the canal.—*Farmer, (Holmes Co.), 28th.*

For the New England Farmer.

AGRICULTURE AN EXTENSIVE AND PROGRESSIVE SCIENCE.

BY JOHN GOLDSBURY.

Agriculture has been defined to be the art or science of cultivating the earth,—tillage—husbandry. In its widest acceptation, it embraces all the common and ordinary pursuits of the farmer; nay, all that belong to his pursuits; such, as the clearing the land from trees, bushes, stumps and stones; the examination of different kinds of soil, and their adaptation to different kinds of produce;—the best method of cultivating different kinds of soil;—the mixing, making and compounding of manures;—the sowing and planting of different kinds of grain and seeds;—the cultivation of the crops and the gathering and securing the same for future use;—the building of fences;—the draining of meadows, swamps and marshes;—the selecting and raising the best kinds and breeds of domestic animals; such as cattle, horses, sheep, swine, poultry, &c., and the best means of fattening the same;—the cultivation of the different kinds of garden vegetables, such as beets, carrots, parsnips, onions, turnips, tomatoes, cucumbers, squashes, &c., which belong to a distinct branch of this science, commonly denominated *horticulture*:—the cultivation of the different kinds of choice fruit; such as apples, pears, peaches, plums, quinces, cherries, grapes, currants, &c., all which come under the head of *pomology*, which is regarded as another distinct branch of agriculture.

It will be seen, then, that the science of agriculture embraces a wide range of subjects, sufficient to call forth the energies, and to task the utmost faculties and powers of every farmer, be his faculties ever so various and ever so abundant. It will be impossible for any one to arrive at perfection in knowledge on all these various subjects. After his utmost endeavors and his most successful efforts, he will still be ignorant of many things, which it would be for his advantage to know. There will be some new experiments to be made,—something still to be learned. But, this should not operate to discourage any one from making further experiments and discoveries, but it should stimulate him to greater exertions. For, the more any one knows, the more skilful and successful he will become in his calling. Knowledge is essential to success in all kinds of business. More especially is this the case in scientific agriculture, which embraces such a wide range of subjects, on which so many experiments are to be made.

At no former period of the world, has the science of agriculture assumed such importance, and engaged the hands and hearts of so many virtuous and intelligent farmers, as at the present time. Its value, utility and importance, are too obvious to need illustration. No subject is better calculated to awaken and cherish that spirit of curiosity and inquiry which is so essential to improvement; and

none affords a better prospect of leading to useful and important results. Within the last few years, numerous papers and periodicals have sprung up, devoted wholly or in part to this subject, which have given new importance to the science of agriculture, or rather, have presented its claims to public attention in a new and interesting light. These works have each their respective peculiarities and excellences; and are generally well calculated to aid farmers in acquiring a competent knowledge of this science. Not every thing, however, stated in these periodicals, is to be taken for granted, as true. On the contrary, every statement should be examined, closely scrutinized, and brought to the test of experiment.

Agriculture is, in its very nature, a constantly progressive science. It is founded upon experiments; and these experiments must be repeated, in order to arrive at the truth. For instance, because a person has once been successful in raising a large crop, on a certain kind of soil, by a peculiar kind of cultivation, it is not absolutely certain, that he, or another person, can do the same again; because other causes, which he knew nothing of, may have contributed, in that particular instance, in producing the result. In order to come at the truth, therefore it will be necessary to repeat the experiment several times. And, if the experiment, each time it is repeated, be attended with like success, we then have something that is tangible,—something that can be relied upon.

There are two methods of cultivating the earth, which divide the agricultural community into two classes, the *imitators* and the *experimenters*. The *imitators* copy the example of others. They do whatever they see others do, without once stopping to inquire, whether there may not be a better, a shorter, an easier, and a more expeditious way of doing the same thing. They neither take counsel of their reason, nor of their more scientific brethren. No matter how great the labor may be, the disadvantage under which they labor, or the expense of time and money, they still continue to do, as they always have done, and as they probably always will do, as long as they live. They imitate others in everything except in the improvements of the day. And some of these they acquire unconsciously without knowing it, or intending it.

The *experimenters* pursue a different course. They "prove all things, and hold fast that which is good." They seize with avidity upon every hint, and upon every new idea, and endeavor to improve upon them. Every new experiment is, to them, a lesson of instruction. They inquire of themselves, why is it thus and so? What is the cause of this? What would be the effect, if the experiment were varied a little? Cannot the same effect be produced by simpler means? In this way, they go on, from one inquiry to another, and from one improvement to another, till they arrive at important results. One inquiry paves the way to many more, and introduces them into a wider field of observation, in which they give the most unbounded scope to all their powers.

LUCK WITH TREES.—We have noticed that certain men always have much finer peaches, and pears, and plums, than most of their neighbors, and are called *lucky*. Their luck consisted, in the first place, in doing every thing well—taking what their neighbors call foolish pains—leaving nothing unfinished;

and in the second place, in taking good care of what they had; that is, giving their trees wide, deep, and mellow cultivation, applying manure when necessary, and specially the liquid manure from the chamber and the wash-tub. Great pains, taken whether with fruit trees or with children, scarcely ever fail to produce good results.

U. S. AGRICULTURAL SOCIETY.

The Fourth Annual Meeting of the UNITED STATES AGRICULTURAL SOCIETY will be held at WASHINGTON, D. C., on WEDNESDAY, January 9th, 1856.

Business of importance will come before the meeting. Reports from its officers will be submitted, and a new election be made, in which it is desirable that every State and Territory should be represented.

Lectures and interesting discussions are expected on subjects pertaining to the objects of the Association, by distinguished scientific and practical Agriculturists. The transactions of 1855, containing a full account of the late Exhibition at Boston, will be distributed to such members as are present.

The various Agricultural Societies of the country are respectfully requested to send delegates to this meeting; and all gentlemen who are interested in the welfare of American Agriculture, who would promote a more cordial spirit of intercourse between the different sections of our land, and who would elevate this most important pursuit to a position of greater usefulness and honor, are also invited to be present on this occasion.

MARSHALL P. WILDER, *President*.

W. S. KING, *Secretary*.

December, 1855.

Gentlemen who are desirous to visit Washington will find the time fixed for this annual meeting, as well as the occasion itself, one of great interest. The Christmas and New Year holidays will be over, the House probably organized, the machinery of the government in active motion, and strangers from every portion of our widely extended country, and from nearly every portion of the civilized world, will be there looking on. All this may be seen during the same visit which shall enable them to do something for the cause of Agriculture, in attending the sessions of the United States Society.

ART OF MILKING.

The art of milking well is not taught in a hurry. It requires long practice to milk properly, and therefore all the young people on a farm ought to be shown how the labor should be done. It is quite important that this branch of the dairy should be particularly attended to, for a good milker obtains at least a quart more from the same cow than a poor milker.

The first lesson to be taught to young people is gentleness and kindness to the cows. They never need be treated harshly, in case the business is properly commenced. Cows that have been caressed and uniformly well treated are fond of having the milk drawn from the udder at the regular

time of milking, for it gives them relief from the distention of the milk ducts.

Let young people be put to milking the farrow cows first, or such as are to be soon dried, and then the loss from bad milking will be less injurious; the hand should extend to the extremity of the teats, for the milk is then drawn easier. They should be taught to milk as fast as possible. More milk is always obtained by a rapid milker than by a slow one. They should therefore be taught to think of nothing else while milking, and no conversation must be permitted in the milk-yard. They should sit up close to the cow and rest the left arm gently against her flank. Then if she raises her foot on account of pain occasioned by soreness of the teats, the nearer the milker sits to her, and the harder he presses his left arm against her leg, the less risk will he run of being injured.

Cows may be taught to give down their milk at once—and they may be taught to hold it a long while, and to be stripped indefinitely. The best way is to milk quick and not use the cow to a long stripping or an after stripping.—*Northern Farmer.*

For the New England Farmer.

ON SHOEING HORSES THAT OVER-REACH.

MR. EDITOR:—I was bred from my youth a blacksmith and farmer, and whether a natural mechanic or not, I was always anxious to know the whys and wherefores of things, or more properly speaking, the casualties and preventives. I was also fond of trying experiments upon such things as appeared favorable of improvements. I was generally in the shop with my father evenings, rainy days, and such other times as I could be spared from the farm and school. By being in the shop so much, I obtained the views of the farmers generally, and by that was enabled to make many improvements on the farm. I learned also, that many farmers entertain very erroneous views about blacksmithing, (and I might add blacksmiths too;) still they were bound to dictate according to their prejudices; as, for instance, one says: "This horse over-reaches, I want you to put the forward shoes as far forward as possible, and set the hind shoes as far back, or he will tear them off." I would sometimes try to reason the case by saying the way to prevent a horse from over-reaching, is to augment the speed of the forward feet, and retard the motion of the hind ones; but in order to accomplish that, I shall have to reverse your directions. Some who had little or no mechanical genius, would cut short all argument, and say, "follow my directions or else not shoe the horse." Of course, a mechanic must obey orders, if he breaks owners; so the horse would go out of the shop, nicely fettered, with his shoes clinking at every step; while, perhaps, the man of inquiry would desire a full explanation. My way is, to make the toe-corks very low, and standing a little under, and the shoes set as far back as convenient on the forward feet, with high heel corks, so as to let them roll over as soon as possible. On the hind feet, I have the heel-cork low, and the toe-cork high, and projecting forward, thus keeping back the hind foot, while coming up over a high toe-cork, giving time for the forward foot to get out of the way. If thus shod, the horse will travel clean, without a clink, and his speed will be increased on a trot, fif-

teen or twenty seconds in a mile. If acceptable, I may say something about shoeing foundered horses hereafter. Dux.

REMARKS.—We shall be glad to hear from our correspondent on the subject which he suggests above.

CONCORD FARMERS' CLUB.

At a recent meeting of this Club, committees were appointed to report upon the following subjects. There are three persons on each committee. We give only the names of the chairman of each.

1. *On Manures*—Elijah Wood, Jr.
2. *Hoed Crops*—A. H. Wheeler.
3. *Root Crops*—Willard T. Farrar.
4. *Live Stock*—Charles Hubbard.
5. *Grass Crop*—Simon Brown.
6. *Grain Crop*—Edwin Wheeler.
7. *Farm Buildings and Farms*—J. D. Brown.
8. *Ornamental Gardening*—E. W. Bull.
9. *Farming Tools*—Francis A. Wheeler.
10. *Fruit and Ornamental Trees*—J. B. Moore.
11. *Poultry*—James B. Brown.
12. *Working Oxen*—Jacob B. Farrar.
13. *Draining*—Joseph Reynolds.
14. *Milk*—James P. Brown.
15. *Feeding Stock*—Daniel Tarbell.
16. *Special Manures*—Jonathan Wheeler.
17. *Vegetables*—William D. Brown.
18. *Pruning*—C. W. Goodnow.
19. *Garden Seeds*—Minot Pratt.
20. *Farm Help*—Gardner Wheeler.
21. *Horses*—Charles B. Clark.

For the New England Farmer

FINE YIELD OF CARROTS.

MR. EDITOR:—On Saturday last, I saw a piece of land in this town, on which grew carrots the present season, under the care of John Peasley, the proprietor, one of our most industrious and successful cultivators. He told me, that the carrots had all been weighed at the town scales, as they were harvested and delivered, divested of their tops—which were left on the ground. To-day I learned from Mr. F. Walker, who has the care of the town scales that he had weighed carrots for Mr. Peasley, the present season, as follows, all of which grew on less than half an acre.

October 23.....	1 load.....	2,070 lbs.
November 5.....	5.....	10,040
November 6.....	4.....	8,010
November 8.....	4.....	8,220
November 8.....	4.....	8,010
November 10.....	1.....	1,539
19 loads.....		37,999 lbs.

Better crops may have been grown by others—but I have not seen them. J. W. P.

Nov. 13, 1855.

A FINE ESSEX HOG.—Our neighbor, CHARLES B. CLARK, Esq., recently slaughtered a hog of this breed, which weighed when dressed *four hundred and seventy-two pounds!* He has plenty of infants of the same race, which promise just as much obesity as this, when they arrive at mature hoghood.

ABOUT MANURE SHEDS.

When we see a reasonable scheme in successful operation we feel more of its force—it stirs us more—than anything we may only hear of it. So thought a certain farmer—or at least so acted he—when he went to work the other day to build a manure shed. He had often heard it remarked that manure kept under shelter was worth double that left exposed in the yard—he had often noticed the difference in its smell, texture and appearance on his own premises, but he had never tried the two, side by side, on a fair experiment, until the present year. Now he saw the difference in value, he believed what he had been told, and he went to work to build a manure shed, so as to reap more of the benefits now so evident.

It is not to be supposed that the story of his experiments will convince all who read it; he had read just as good, long before he really began to “show his faith”—in the only true way of showing it—“by his work.” But it is “good enough to tell,” for all that, and we hope, will not be without its influence. He has two good-sized open sheds attached to his barn-yard, which his cows occupy for shelter at will in stormy weather. He keeps his oxen and horses in close stables, and these, as well as the sheds, are kept well littered through the winter. The manure from the stables is thrown into the yard; that made under the sheds remains there; both have a sufficient mixture of straw to prevent too active fermentation. And both, were they in the same situation in regard to shelter, would be of equal value.

Last spring, incited thereto by a remark in the *Rural*, he determined to test the difference as closely as he could, without going into any minute figuring or preparations, for that is too small business in his eyes, for one with so much work to attend to. So on his corn and barley ground, he took pains to draw the manure from the yard and from the sheds in equal quantities—though he said he did not think it was hardly fair, for in the yard manure he had to cart off a large quantity of water, making—if there were no other difference—a sheltered load worth one-third more than an unsheltered one. (This was the first idea that really hit him on the subject. He saw that he could save the cost of a simple shed, just in the expense of cartage.) Both kinds were treated in the same manner, the crops were sowed and cultivated the same; but he did not wait till harvest to decide that he would shelter his manure, hereafter.

Where the sheltered manure was applied, the corn and barley came up first; and they kept ahead all the season. The cut-worm worked less in the corn, and the barley seemed to escape all injury from insects, though that part to which the yard manure was applied suffered from the Hessian fly to a small extent. The difference in the two was very plainly marked, and at harvest, it was estimated that the shed manured land gave a crop one-third greater.

Now our friend has erected two manure sheds. One covers the dung-heap from his horse stable, the other is intended to contain that from his cattle stalls, and the major part of the yard droppings, gathered from day to day. Some time, we doubt not, he will go into manure cellars, and stables for all his stock; but this move is a creditable one, and in the right direction. He will also learn

the benefit of muck as a material for cheaply increasing his stock of manure, and then we shall see a shed for that, to be used as an absorbent of the liquid—now, something stronger than rain-water, and worth saving and cartage.

His sheds are simple and cheap affairs.—Crotched posts are set for the front, the back is the barn-yard fence—one shed is covered with boards—the other with poles and straw. We expect to hear more of their success or failure hereafter. That other improvements will follow, is very sure; for a good example, especially if a man sets it himself, is certain to influence those who see it.—*Rural New-Yorker*.



HOWE'S ADJUSTABLE CATTLE LEADER,

AND CHECK FOR FENCE BREAKERS.

It has often seemed to us a somewhat cruel matter to punch out the cartilage of a bull's nose, and thrust in an iron ring, and keep it there as a perpetual annoyance to the poor animal. Still, something must be done to afford a safe control of them. The device of Mr. J. A. HOWE, of this city, as represented above, seems to be just the thing. The thumb and finger being pressed immediately over the ends of this spring, open the balls on the other end; it is then slipped on to the cartilage of the nose, and the spring in the centre gently closes it. The cartilage being thinner on the inside of the nose than it is near the end, prevents the balls from slipping off,—so that the harder the strain is on the cord, the tighter becomes the balls. The implement can be applied, or removed, in a moment.

It is also intended for unruly cattle by a simple process which is not illustrated in the above engraving.

A patent has been applied for, and the implement will soon be for sale.

A STRATUM OF SALT UNDER NIAGARA FALLS.—E. Merriam, of Brooklyn, who has examined the rocks underlying the limestone bed of the Niagara river, states that he found a saline stratum under them. This stratum is the foundation of the great limestone walls which form the great cataract of Niagara, a frail structure it is, and it is in this stratum that the Niagara has the whole of its bed below the Falls, and being soft, the water which falls over the Horse Shoe and over the American, north

of Goat Island, has had no difficulty in sinking chasms of vast depth, into which the broken rock of the limestone walls which compose the cataract falls. This stratum extends over a large tract of country, watered by the great lakes, which seem to have a subterranean communication with the volcanoes of Hecla, in Iceland, and those of the southern part of the European continent, as the disturbance caused by the earthquake at Lisbon, in 1775, caused the agitation of the waters of Lake Ontario. He says that an immense volume of gas arises from the chasm into which Niagara plunges from the lofty precipices which form the Horse Shoe on the American fall, and might with proper apparatus be ignited—and when on fire would exceed in beauty the flames of the gas ascending from the deep ravines of the salines of Kanawha, which give a column of flame of seventy feet in height. His conclusion, from all his observation, is, that the great falls do not date beyond the universal deluge.

SPIRIT OF THE AGRICULTURAL PRESS.

PERUVIAN GUANO.

Prof. NASH, in his *Farmer*, says:—"This is an excellent fertilizer. Every farmer should have more or less of it at command for special applications. On poor, out-of-the-way soils, where heavy manures cannot be carried without too much expense, it may be used with decided advantage for almost any crop. On lands of a good quality well situated for working and manuring, *guano will not, in the long run, pay at present rates, if used for the ordinary purposes of inland farming.* When there is beforehand almost a certainty of high prices for produce, the inland farmer may do very well to try it."

We have recently conversed with two gentlemen—both practical men, and of critical observation—who informed us that they now have fields in grass, and yielding good crops, laid down some five, six and seven years ago, manured then solely with guano, and receiving little or no manuring since. If such were to be the general result, we might bring up our farms to a wonderful degree of fertility; because a third or half of the tillage land laid to grass with guano, and producing a fair crop for several years in succession, would enable us to appropriate all the manure of the farm to the hoed crops. This would allow of very high manuring, and put the land in such condition as to produce heavy grass crops without the further application of guano. But we need further experiments, and test the guano upon its own merits, by putting the land into grass without a particle of any other manure.

THE AMERICAN SCYTHE.

A writer in one of the English papers inquires if any of their agricultural readers are acquainted with the American scythe, its construction and superiority over those of ordinary use in the British isles? It appears that a native of Yorkshire, England, on a visit to his native land, brought the subject of our scythe into comparison with those in use in that

country. He told his friends there, that if it were possible to introduce largely the true American scythe, though at great money outlay, the gain to Britain would be very remunerative, and *that* by its superior efficiency. He also told his wondering friends that one man here could cut four acres of barley or oats in a day! The writer states that the real shape of the scythe could not be ascertained. Is it possible that the American scythe has not yet been seen and used in many parts of England? We recommend to our friends, Ruggles, Nourse, Mason & Co., to send Mr. MECHE a case of half a dozen by the next steamer.

HARVESTS IN EUROPE.

A French paper, the *Constitutionnel*, says there is a large deficit in the crops of that country, and that they will be under the necessity of purchasing largely of other countries. They have usually gone to Russia and the countries on the Black Sea, but this year, they say, "we shall address ourselves to the United States, where the harvest has been very abundant, and it is evident that we may pay in produce or drafts for a considerable part of the corn [wheat] which we purchase."

The crops of wheat and rye throughout the whole of Northern Europe are lamentably deficient. The *Mark Lane Express* (London) says:—"America as well as ourselves, began this cereal year with an exhausted stock; whilst on the other hand, the population of the States increases even faster than our own, or any European State; so that consumption keeps pace with production up to the present time, whatever it may do hereafter. They have, however, had this year an excellent crop, and a large increase of land under wheat, and will probably be able to export as much, if not more, than in 1847. The question therefore is, what proportion of this shall we obtain?"

In some parts of Europe, however, the harvest has been good. In Austria, the wheat crop was abundant, and so in Prussia and Egypt.

SCARCITY OF HORSES IN EUROPE.

A correspondent of the *New York Spirit of the Times*, writing from Paris, says:—"In London, ladies' saddle horses and carriage horses are not to be had. In thirteen days' search, I could not find a decent pair for sale at any price. If this war lasts another year, the Europeans will be importing horses from America; and it would be well worth the attention of our farmers and breeders to raise large horses, fit to draw a heavy carriage, or carry a heavy man. Good saddle horses for gentlemen are still to be found by paying for them; a first rate one stands you \$300. A Utica (N. Y.) paper states that a gentleman is now in that city purchasing carriage and saddle horses for the market."

HOGS AND CORN.

Good pork has not been so high for several years

as it is now; indeed, pork in New England has been raised at a very small profit if any for six or eight years past. The Cincinnati *Prices Current* says:—"Within the last two weeks there have been numerous contracts made for new corn, amounting in the aggregate to one hundred and fifty thousand bushels, at prices varying from thirty-one to thirty-five, all to be delivered in this city before the first of next January. Holders, under the influence of the excited state of the market for breadstuffs, and anticipating a large foreign demand for corn, are now very firm, and contracts could not be made below thirty-five, and many are asking higher rates.

There is a better feeling on the part of hog buyers, with an increased disposition to operate. Contracts for two lots have been made at \$6.75 for November delivery, and holders are now asking \$7, and seem pretty stiff at this rate. For December delivery, \$6.50 has been paid, and at this rate there are, perhaps, more buyers than sellers."

AGRICULTURAL BENEFITS OF SNOW.

It is with some feelings of regret and discomfort, that farmers, as well as other men, regard the approach of winter. That during several months, there must continue an exhausting drain upon the accumulations of the year, without any replenishing streams to counterbalance its effects, is a fact not pleasant to contemplate, especially if an individual happens to be straitened in supply. Hence, when a storm of snow occurs early in the season, as one did in this locality, on the twenty-fifth ult., the inquiry naturally arises of what benefit is snow? We see its evil effects in the wretched state in which it places our roads; in the strained and broken manner it leaves our trees, especially if it comes, as in this instance, before they have been defoliated by the wind and frost; in the downcast and sorry look it gives to all animated nature, man included.

It is not our purpose to assert the value of an untimely snow, any more than that of an untimely frost. Any one of the phenomena of nature may be attended with evil consequences, however beneficial and necessary in a general way. Too much rain or too little, too backward a season or too forward; and a thousand things generally beneficial, may be specially injurious. Nature works by general laws, and in their impartial administration, does not stop to inquire whether or not this man's seed is sown, or that man's harvest is secure.

Snow, in latitudes, where the temperature is sufficiently low for it to fall, is of vital importance to vegetable life. Its peculiarly porous structure renders it an exceedingly bad conductor of caloric; and hence, when covering anything either warm or cold, and greatly differing in temperature from the snow itself, or from surrounding objects, it requires a long period of time for the equilibrium to be restored.

If the earth becomes early covered with snow, and before the ground is frozen, it will remain above freezing point the entire winter, even though the atmospheric temperature should go down many degrees below zero. So decided is its protection, that if the soil be penetrated with frost to the depth of several inches before the fall of snow comes on, the

caloric of the subsoil will remove the frost, notwithstanding the atmosphere has not at any time risen much above freezing point. The ground had been frozen like a stone before the snow fell upon it, the weather continuing many weeks below freezing point; and yet afterwards, on removing the snow, the ground was found thawed out, and easily lifted with a shovel. Of course, a boy's reason was given for this circumstance, viz: that the snow was warm, and had thawed out the ground, instead of the true one, that its non-conducting properties had intercepted the radiation of the heat from the lower strata of the soil, and this, acting upon the upper stratum, had removed the frost.

Alpine plants, that outlive the severest winters of mountain districts because protected by snow, have perished in the comparatively warm climate of England for want of such protection. We had a good illustration of the genial influences of snow in our own country last winter. The thermometer went down to a point unprecedented in our history, being no less than twenty-two degrees below zero. That was a point of depression indicated for the first time in a record of sixty-seven years, and for how long a period previously, it is impossible to tell. Of course, the peach crop was utterly ruined, and orchards, which were wont to yield hundreds of bushels of splendid fruit, produced this year, nothing but leaves. At our horticultural show, however, there were exhibited several magnificent specimens of peaches, which, upon inquiry, were found in every instance to have been produced upon limbs that had, by a fortunate accident, been bent down and covered with a snow-drift. The temperature in their position did not probably fall to zero, and if they could have laid upon the ground, would barely have reached freezing point. The earth at this severe period was mantled with a heavy fall, and we tremble at the possible consequences which might have ensued in case the ground had been exposed and denuded. As it was, the frost did not penetrate to an unusual depth, and the wheat fields and the meadows came out in the spring, fresh and green from their long winter slumbers.

Snow has been called the poor man's manure; but we are not aware that analysis shows it to possess any fructifying elements not contained in rain water. The gradual manner of its melting away enables the soil to absorb a greater portion, and thus become thoroughly saturated at the season when such a result is desirable. The absorption of caloric, which becomes latent in melting snow, prevents a sudden transition from the chill of winter to the warmth of spring. If it were not for this, vegetation would start too early, and all the fruits and tender plants would be nipped by vernal frosts. As the seasons are now constituted, the sun must at least cross the equator, and the length of days exceed that of the nights, before the snow melts from the hill-side, and disappears in the vale. It has then performed its mission, a gentle and a merciful one, whatever may have been its chill and forbidding aspect in the early autumn.

A locality that experiences abundant falls of snow, which cover the ground uniformly through the winter, will admit of the cultivation of many things that cannot be grown in other places with no lower temperature, but destitute of snow; and many countries would be, without its protecting influences, mere regions of waste and desolation.—*Rural New-Yorker*.

For the New England Farmer.

HOW TO KEEP YOUR HOUSE WARM IN THE COUNTRY.

BY HENRY F. FRENCH.

Open Fire-places nearly Obsolete—Old-fashioned Kitchens—Bedding Wood—Franklin Stoves and Fire-frames—Heat and Fresh Air, Necessaries as well as Luxuries—How much air a Man uses—How agreeable to breathe the same Air that has just been used by a dozen others!—Close Stoves—Carbonic Acid by Slow Combustion—Poison from red-hot Iron—Ventilation, Principles of.

Discourse as pleasantly and as learnedly as we may, of the cheerfulness and healthfulness of an old fashioned wood fire on the hearthstone, we can never bring back any more of that agreeable idea than the pleasant memories of one generation which has just lived through it, choose to furnish to posterity.

Wood piles on the hearth, like wigwams and log-houses, are, as the clearings increase, getting to be matters of history. They are very pleasant things to remember, but on the whole would be, to our more cultivated sensibilities, in these times, very uncomfortable to depend on, for house warming, in a New England winter.

I trust I am not ungrateful in what I am saying. Many a pleasant evening have I danced with the boys and girls of the village by the light of the blazing fire on the kitchen hearth. Many a time have I sat on a stool in the chimney corner, and looked up and seen the stars twinkling through the broad flue. Well do I remember the high-backed *settle*, which was as essential then in a kitchen, as a *sofa* is now to the parlor. There may be readers of the *Farmer* so ignorant as not to know what a *settle* is! It is a high-backed wooden bench, long enough for four or five, or occasionally, six or eight, boys and girls to sit on, boarded close, from top to bottom on the back, and with arms at the ends, and a board overhead—a piece of furniture doubtless designed, not only for a seat, but for a screen to break the current of cold air, that always whistled past every door and window towards the big fire-place to supply the tremendous draught. I remember well, too, the fun we had, getting in the wood for the evening fires, at one of our neighbors' where the old fashioned fire-place flourished in its purity. The boys had a sled, with a yoke at the end of the tongue, for the two largest to pull by, and a rope hitched forward, for the smaller ones. We piled on the wood, four-foot length, to the top of the stakes, about three feet high, and then at the word, with the doors set open, in we went, into the kitchen, sled and all, and unloaded near the fire-place. A *back-log* of any size not less than a foot and a half in diameter, and a *fore-stick* of half the size, were essential to every respectable fire, and a supply of pine knots for light, finished the preparation for the evening's comfort, in the way of light and heat. They say there is a house in Chester, where the occupants always hauled the wood into the kitchen, sled-length, with a horse, but that was

before my day. In our own Homestead, we used to burn four-foot wood in the kitchen, and ours was a modern house, built about the year one, of the present century. Now as to the comfort of this style of fire—everybody knows who ever lived in an old fashioned house, in the country, that in a cold day, everything froze, even in the back part of the room, with the big fire blazing, and the chambers where there were no fires, seemed considerably colder than out-doors. Who, that remembers how his breath was frozen like snow upon the blankets,—(we should have perished in sheets)—at waking, ever desires to go back to the old way of keeping warm?

And then the labor and expense! To be sure the wood was reckoned of little value on the lot. But, at my father's, and at every respectable establishment, it was the winter's work for two men, and a team of four oxen and as many steers, to get up the years stock of fuel. The men and teams were off by daylight, and brought home the wood, sled-length, load after load, and rolled it up into huge piles in the door-yard, and he was considered an uncommonly forehanded farmer, who ever had a stock of seasoned wood on hand. And so they toiled all summer, to raise corn and hay and potatoes enough, to keep the men and teams through the winter, and worked all winter long, getting up wood to keep from freezing!

Wood fires, on the hearth, are out of the question. They cost too much, and that is decisive of the matter. Next in order, came Franklin stoves, and fire-frames, and patent fire places, of all descriptions. The old fashioned people must *see the fire*, and war was, for a long time, waged against close stoves, mainly because they shut the fire from sight. I have always fancied, that the reason why we love to see the fire, is because we are usually cold where open fire-places are used. I never knew a person who thought a blazing fire a very beautiful object in dog-days, and am inclined to think, that a person who is comfortably warm, usually thinks very little of the presence or absence of the fire that warms him; while it is very natural for one who is obliged to stand close by the andirons, and turn round, like a goose suspended by a string to roast, once a minute, to keep from freezing—it is very natural for him to like the looks of a wood fire. Some one has suggested, as an economical substitute for the use of those who want a fire to look at, that they should warm their house with a stove, and have a picture of a good fire painted on the fire-board.

The objections to Franklin stoves and fire-frames were found to be, that they smoked, because in modern buildings, the rooms were too tight to supply the draught, and again they consumed too much wood. They too are gone, like the Indians, an occasional straggler, only, remaining, and we in New

England, in spite of all sorts of warnings, of all sorts of fatal effects, have practically come to the choice between *stoves* and *furnaces*. Leaving all other questions for those who believe that the earth goes backward sometimes, let us discuss for a little space, this question between stoves and furnaces, remembering always, that we are speaking of houses in the country. Your brick blocks in the city, sheltered on every side, warmed from cellar to attic day and night, form a distinct class, of which we say nothing now, except that the principles which govern the subjects of heat and ventilation are not limited in their application to the rural districts.

Two objects are to be kept distinctly in view, heat and fresh air. Perhaps the latter should be put first, for without air, a man will die in about three minutes, while at the lowest temperature known in this latitude, he would live much longer than that, exposed naked, before he would freeze to death.

There is no difficulty in generating heat enough at a cheap rate. An air-tight stove, in an air-tight room will do that, but the difficulty is, nobody can live in such a place, thus heated. A healthy man must have about a pint of air at a breath, and he breathes about a thousand times in an hour, and so he requires about *fifty-seven hogsheads* of air in twenty-four hours! And this air, once breathed, is unfit for respiration, until chemically changed. The pint of air which passes from the lungs, does not remain in one lump by itself, in some corner of the room, so that a fresh quantity is taken in at the next breath. A single whiff of cigar-smoke will pervade the whole room in a few moments, and an old pipe zealously worked by some vagabond, will pollute the atmosphere of a whole street, as you follow behind him. And so, delicate ladies and gentlemen, so fastidious that they would faint at the idea of drinking from the glass which another had used, sit pent up in an unventilated room, and breathe—what? Really, it is too disagreeable a topic to pursue so minutely.

The air is, as we have seen, polluted—in other words, it is deprived of its oxygen, and receives in return *carbonic acid* and vapor, by passing through the lungs in breathing.

This same poisonous carbonic acid is generated also, in large quantities, in the combustion of coal, of all kinds. It is heavier at the same temperature, than common air, and can therefore only ascend, through the stove-pipe, or chimney, by being heated and so expanded as to become lighter than common air.

In the air-tight coal stoves, where the combustion is very slow, and *all the heat is saved*, the carbonic acid is saved also, and instead of going up the chimney, rolls out into the room. It sometimes takes the form of carbonic oxide gas, or, as the miners call it, coal gas, which is, when pure, at

once destructive of human life. Such a fire is like a pan of coal ignited in a room without any escape for the smoke or gas—a very common means of committing suicide.

A third method by which the air is rendered impure and unfit for respiration, is by coming in contact with *red hot iron*. Carbonic acid is generated not only from the iron itself, but from the particles of dust floating in the air, which are consumed at once by contact with the iron. Iron contains also, usually, traces of sulphur, phosphorus, and sometimes arsenic, all of which are given off by the iron at a red heat.

These three methods of corrupting the air, namely, by breathing, by slow combustion of coal, including the charcoal made in air-tight wood stoves, and by contact with red-hot iron, are always to be kept in mind. The remedies obviously are *ventilation*, or the introduction of fresh air, the use of stoves open, or with sufficient draught to carry off the unhealthy fumes, and the disuse of all stoves and furnaces that require heating to redness.

I have room only for a few general suggestions as to ventilation. Ventilation implies the introduction of air, and its escape; for it is obvious that air cannot come into a room, unless a like quantity at the same time escapes, for the room is at all times full. All stoves that have a free draught constantly carry air out of the room through their smoke pipes.

If your room were perfectly tight, the fire must go out, or *smoke*, by the air coming down the chimney, in part. You ventilate such rooms by providing an opening for the air to enter the room, and this may be often done by introducing fresh air by a pipe or box through the cellar, and admitting it by a register, under the stove, so that it may be warmed as it enters.

If the heat comes from a furnace, the fresh air being supplied below, and heated, must have space in the room which is to be heated, or it cannot enter. The room is therefore to be ventilated by providing an opening for the escape of the air from it, and this is done best by a register near the top of the room; for, although, as we have seen, the air which has been rendered impure by breathing, is, at the same temperature, heavier than before, yet it is warmed in the same process of breathing and so rendered lighter, and at first ascends, as you may see your breath do, in any clear, cold morning. In the case of close stoves, or air-tights, there is no change of the air,—no tendency of the air to enter or escape. The room soon becomes like a corked up bottle of the water of the Dead Sea, unless artificial means are provided for the admission and escape of air. A register under the stove bringing fresh air in from without, and a register at some distant point at the top of the room, for its escape, are perhaps the best means of ventilation.

But my space, for this number, is already consumed and the question of stoves or furnaces, which I had intended to discuss, must rest for the present, upon the general principles already suggested, perhaps to be further considered in the future.

For the New England Farmer.

MEANS OF IMPROVEMENT.

BY JOHN GOLDSBURY.

The facilities for acquiring and diffusing information are immeasurably greater than they ever have been at any former period of the world. The great improvements in the arts and sciences, the general progress of the age in civilization and refinement, and the spirit of unwonted enterprise pervading all classes in the community, are the surest harbingers of a better day. They have already done much to break down the barriers between different classes of men, and to introduce to each the knowledge and the business of all.

This is as it should be. Man was not made for himself alone, but for society, in which there is a community of interest, and, in some measure, of feeling, which becomes a bond, uniting all together as one common family; so that whatever interests and deeply affects any one class of the community, will, in some measure, interest and affect the whole. We live in an inquiring and observing age. Every improvement, in agriculture or the mechanic arts is now chronicled by the public press, and sent abroad on the wings of the wind, to be read by all classes of men in every part of the world. The facility and rapidity of communication between different and distant places, are among the proudest triumphs of human knowledge, and will do much to correct public opinion, and to direct it to its legitimate objects. There are none so high, and none so low as not to be benefited by the means of intelligence. The thoughts and experiments of one individual are now communicated with electric speed, to quicken the thoughts and experiments of another; and, in this way, all are benefited. Besides, much is to be effected through the agency and instrumentality of our common schools. These little primary institutions, in which the children of the rich and the poor enjoy equal privileges and advantages, and receive the same instruction, are the places in which to sow the seeds of knowledge. And, if these seeds be sown with care, they will spring up and produce an abundant harvest. Here, then, we have a lever power, by means of which we may be enabled to elevate and educate all classes in the community; to qualify them for entering the great field of labor and of usefulness, with skill, dexterity and enterprise.

Our progress, in agricultural knowledge, is onward; it is slow, but sure. We have not yet reached the extreme point of improvement. Before that is reached, many a project will have been proposed and rejected; many an experiment tried and failed. Still the spirit of investigation and experiment is abroad, dangerous only to those who are in error, and who are afraid of improvement. It is highly probable that many of the inventions and improvements of our day would have been regarded by our early pious ancestors as little better than damnable heresy and witchcraft. What would they have said at beholding the effects of *steam*, which is

now used in propelling almost all the machinery of the world; when in their day, every thing was done by *manual* labor, and at a very slow rate, and in a very inferior manner. It *then* took as many *days* to do the same work, as it *now* does *hours*, and without doing it half so well. What would they have said at witnessing the more astonishing effects of the *electric telegraph*, by means of which intelligence is now transmitted, with the speed of lightning from one end of the United States to the other; when in their day it would have taken several months, if not years, to have done the same! We see, then, that the spirit of improvement has been abroad in the land, and has wrought out important results; and, that if we do not keep up with the spirit and improvement of the times, we shall soon find the world ahead of us, and that all our ideas and associations belong to a past generation.

It is true, that most of the improvements of our day, great and astonishing as they have been, have been made in the mechanic arts, in the use of machinery, and in the means and facilities of intercommunication. Some improvements have been made in the tools and implements employed in agriculture; but few improvements have been made in the science of agriculture itself. And even these improved tools and implements are not generally used by farmers. Too many still use the old and worn-out implements of a by-gone age. They still continue to plow and harrow, to plant and sow, and to dig and cultivate the ground, in the same manner, with the same implements, and with the same results, as did their fathers, grandfathers and great-grandfathers before them. They never once stop to take counsel of their reason or to consult with their neighbors, upon the best means and methods of doing the same things. The consequence is, they have fallen behind the age in which they live, and are living in the age of high-heeled boots and peaked-toed shoes, when people used to go to mill with a bag thrown across the back of a horse, having the grain in one end of it, and a large stone in the other.

Still, in proportion as knowledge has increased among the people, and industrious habits have been formed, in the same ratio have the means of improvement increased. Every one must have noticed the greater productions of the educated and skilful laborer over the ignorant day laborer who knows just enough to do what he is told to do. Every one must have witnessed the increased skill and power of the scientific laborer, and the greater profits which come from forethought, order, and system, as they preside over all our farms, in all our workshops, and in all the labors of our households;—the care that mends a fence and saves a cornfield; the prudence that cuts the coat according to the cloth, that lays up something for a rainy day, and that saves all its earnings; and the wisdom that leads the farmer to avail himself of all the means of improvement within his reach. Progress—improvement—should be the motto of every farmer.

THE WAY IN WHICH TOADS SHED THEIR SKINS.—I have a small house under my care for growing cucumbers. There is a bed in the middle of it, and the soil is about 3 feet high from the ground (i. e., to the top of the hills where the plants are in.) A person, therefore, standing in the house can examine an object placed on the hill with ease. Last

Saturday, about seven o'clock A. M., I uncovered the house, and went to see that all was right, when to my surprise I saw my pet companion, a fine toad, apparently in the agonies of death. It was seated at the end of the ridge, or hill of soil; its mouth, or rather under jaw opening every few seconds (the top jaw did not move), the eyes shut, and the body violently convulsed each time the jaw opened, and with each convulsion of the body the right fore foot was raised to the head. I placed myself in front of it, and perceived that it was drawing something into its mouth each time the jaw moved; at that instant the right eye opened, it then inflated the body on the left side, and drew in the right, placing at the same time the left fore foot on the head behind the eye and drawing it down to the mouth; it then appeared to hold its fore foot in the mouth for about a second, when it drew it out, and I distinctly saw the three points of the skin that came off its toes, outside its lips till the next opening of the jaw, when they were drawn into the mouth. When it drew its foot over its left eye (which before was shut), it broke out as bright as ever. Some folds of the skin adhered to the left leg, but by two or three motions of the jaw they were gone, and in about a minute the skin was drawn off the lips—the toad had eaten its own skin, and there it stood with its new covering as bright as if it had been fresh varnished. I endeavored to touch it, to feel if it was clammy, but the creature gave a vigorous jump, and the soil adhered to its legs. I looked at it an hour afterwards; it had then begun to resume its dingy brown color. The time it took to get off its head-dress was only a few minutes. It appeared to me that each time its jaw opened it drew the skin forward, while it distended the body on the side to be uncovered.—*W. Turner.*

For the New England Farmer.

A SINGULAR TREE.

MR. EDITOR:—Several times within two years I have been asked whether I had ever seen or heard of a certain curious or singular evergreen tree in the town of Methuen, in Essex County, Mass., and being engaged in raising forest or ornamental trees, I this day took the trouble to go a short distance out of my way to see it, and propose to give you a short, but not botanical, description of it, viz:—

I should describe it as a white pine tree, 35 feet in height, 18 inches diameter, 3 feet from the ground, straight and smooth like an old growth swamp pine up to about 14 feet high; it then branches out very thick, forming a head 25 feet in diameter, of very regular cone shape, so thick as to be entirely impenetrable for the entrance of birds on the wing. The limbs are so thick that it would be almost impossible for a man to climb through it. Ten seed-cones that I found under it measured less than three inches in length, (the common pine averaging over six), the leaves being very much thicker than the common pine, and the joints on whorls of limbs. The tree stands in open, cultivated ground, and is perfectly thrifty. Several young trees that have been transplanted and cultivated by Mr. JEREMIAH BARKER, are 2½ feet high, and the diameter or spread of limbs from 2 ft. 9 in. to 4 ft., in all cases showing a greater diameter than height. From its general appearance, seed-cones, &c., I suppose it may be a new variety of the white pine not described by Mr. Emerson in his "Trees of Massa-

chusetta." At any rate, it will well pay any lover of trees the expense of a few miles ride, to see it. It stands on a farm formerly known as the "Perley Morse" farm, 3¼ or 4 miles south-westerly from Lawrence, and a mile or two more than that distance from Lowell, in a north-easterly direction, or less than a mile from the Bartlett farm. It is one of the greatest natural curiosities that I ever saw in the shape or form of a tree. B. F. CUTTER.

Pelham, Oct., 1855.

For the New England Farmer.

MILK.

The component parts of milk are the same in all animals. The only difference in the milk of different animals, is in the different proportions of its component elements. These elements are caseine or cheese, butter, sugar, saline matter and water. Sometimes, however, substances are found in milk, derived from the food, which render it medicinal and even poisonous. The following table exhibits the composition of the milk of different animals, according to Professors Henry and Chevalier:

	Woman.	Cow.	Ass.	Goat.
Caseine.....	1.52.....	4.58.....	1.82.....	1.06.....
Butter.....	3.55.....	3.13.....	0.11.....	3.82.....
Sugar.....	6.50.....	4.77.....	6.06.....	5.26.....
Saline matter.....	0.45.....	0.60.....	0.34.....	0.58.....
Water.....	87.98.....	87.02.....	91.65.....	88.80.....
	100.00	100.00	100.00	100.00

The proportion of butter and cheese in the milk of the cow is well known to depend upon her food, and the distance of time from the birth of the calf. The milk, several months after this period, contains much more butter, than soon after the calf is dropped. Milk, when viewed by the naked eye, appears to be a homogeneous white fluid; but when viewed through a microscope, it exhibits an infinite number of minute globules. These consist of an oily substance, and when collected together, they constitute butter. When milk is set at rest, in a cool place, these oily particles being lighter than the other parts, gradually rise to the surface, and form cream. When milk is exposed to the atmosphere the sugar it contains is converted into an acid called lactic acid. The warmer the atmosphere to which it is exposed, the more rapidly does this change occur. This acid causes the caseine to coagulate, and thus forms curds and prevents the separation of the cream. Hence when milk is set to allow the cream to rise, it should be kept as cool as possible, in order to retard the formation of this acid, and thus allow all the particles of butter to rise to the surface. As this acid is usually formed before all the butter has separated, the curd retains a portion of it, sometimes nearly or quite half of the butter is retained in the curd. The longer we can keep milk sweet, the more cream rises. The milk of different cows differs in this respect. From some, the cream separates more rapidly than from that of others. Perhaps this is owing to the different proportions of caseine they contain. From forty-eight to seventy-two hours are required to separate the cream. When this separation is completed, the milk loses its white color, and assumes the bluish hue, by which skimmed milk is readily distinguished from milk containing the cream.

When cream is taken from milk, a portion of milk still adheres to the cream. The lactic acid contained in this adhering portion causes the cream

to sour. Various methods have been resorted to, to prevent the souring of milk, the chief of which are the addition of some alkali dissolved in water, and added to the milk when first set in the dairy. Carbonate of soda, carbonate of magnesia and liquid ammonia have been used for this purpose. But neither will answer the purpose effectually, unless added in pretty large quantity. When they are added in sufficient quantity to prevent the souring, a portion of the alkali will combine with the particles of butter, and form a species of soap, which rising with the cream, injures the quality of the butter. The only effectual method appears to be, to keep the milk as cool as possible without freezing, and to churn the cream soon after it is taken from the milk.

R.

Concord, Nov. 20.

WINTER MANAGEMENT OF SHEEP.

In the Patent Office Report for 1854, there is a valuable article on the "History and Management of the Merino Sheep," by GEO. CAMPBELL, Esq., of West Westminster, Vt., from which we extract the following remarks on the winter management of sheep, which will be read with interest:

Much of the success of the wool-grower depends upon the winter management of his flock. Sheep are animals which pay their owners better for good care and keeping than any other stock usually kept on a farm; but if fed with a stingy hand, or neglected, if suitable conveniences are wanting, they pay perhaps as poorly as any. The annual loss to the United States, resulting from a want of suitable sheds and other conveniences for the winter accommodation of sheep, is immense. The promptings of self-interest would seem sufficient to induce our farmers to adopt a better system of winter management. No intelligent farmer at this day will attempt to deny the principle that warm enclosures are equivalent, to a certain extent, for food; a variety of well-conducted experiments have conclusively demonstrated the fact. A large proportion of food consumed in winter is required for keeping up the animal heat, and consequently, in proportion as the apartments are warm, within certain limits, the less amount of food will be required. The other extreme, too close apartments, would be objectionable from the impurity of the air, and should be avoided. Sheep have very little reason to fear injury from this cause. The majority of those in our State suffer for the want of shelter and a suitable quantity and variety in their winter food. Many flocks are brought to their winter quarters in fair condition, but are fed so sparingly that the growth of their wool is almost wholly arrested during the winter season, the fodder given them being only sufficient to sustain the vital functions. Under such circumstances the food consumed by them is in fact nearly lost. The owner has received no return in the increase of wool nor in bodily weight; and he will suffer further from a large per cent. of actual deaths before the time of shearing.

With such a course of management the profits of wool-growing will necessarily be small. If neither self-interest nor the feelings of humanity will induce the farmer to provide properly for his dependent flock, he will find it for his advantage to keep some other domestic animal, and I know of nothing more suitable for such men than a hardy

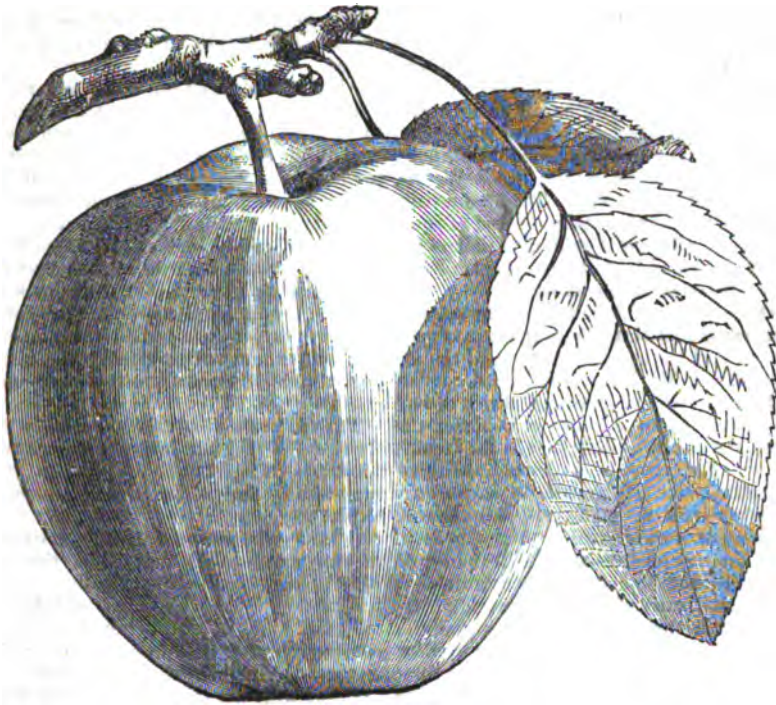
goat. While I protest against the starving system, it would seem hardly necessary to caution farmers against the opposite extreme, too high feeding, which is also detrimental to the health and long life of the animal. While preparing sheep for the butcher, high feeding is necessary and proper, but for store sheep and breeding ewes, an over amount of fat, produced by high keeping, is decidedly injurious; and, aside from the attending expense to produce this state of things, it has a tendency to shorten the lives of the sheep and enfeeble the offspring. The forcing system of feeding brings animals to maturity early, but is productive of premature death.

The proper and the most profitable mode of feeding, for breeding and store sheep, is that which will develop in them the highest degree of bodily vigor. Sheep fed in this manner would endure the fatigue of a long journey, while those high fed would fail from excess of fat, and the scantily fed, from muscular debility. Every wool-grower will find it for his interest to provide warm, capacious, and well ventilated sheds for his flocks, with a convenient access to pure water. The feeding racks should be made with good tight bottoms, in order that the chaff and seed, the most valuable part of the hay, may not be lost. Such racks will also answer for feeding out roots and grain, and will avoid the necessity of having an extra lot of troughs for that purpose.

The different ages and classes of sheep should be properly assorted. This classification, however, must be left to the judgment of the breeder. The size of his flock, and his conveniences for keeping will determine the extent of the classification. It will be necessary, in all flocks of considerable size, to place the strong and feeble, in separate flocks. The breeding ewes should constitute another division, and so on with the lambs, keeping each class, and age by themselves.

In regard to the question, how often should sheep be fed? a difference of opinion among good managers exists. While one believes that twice a day is sufficient, another thinks it desirable to feed three or four times; but the most important point, I apprehend, is to feed regularly, whether twice, three or four times a day. The writer feeds, at present, hay twice, one day; the next, hay in the morning and straw at night, and so on, giving hay and straw alternately, instead of hay; and beside, a feed of roots and grain is allowed at mid-day, allowing a half bushel of corn and cob, or oatmeal, mixed with two bushels of roots, to the one hundred head. As sheep are fond of a variety of food, it is desirable to make as many changes as practicable. If allowed constant access to pine or hemlock boughs through the winter, it will be conducive to their health. Salt is equally as essential in winter as in summer, and should be kept constantly by them. Rock-salt, which is imported in large lumps, weighing from 20 to 50 pounds each, is the cheapest and best. Sheep are not liable to eat it in sufficient quantities as to ever injure them, as they can only get it by licking.

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THE WILLIAMS APPLE.

This apple is called *Williams Favorite*, and *Williams Early Red*. It originated in Roxbury, near Boston, and was introduced by A. D. Williams, Esq.,—hence its name. COLE describes it as “large, oblong-ovate; bright red; dark red in the sun; little pale yellow in the shade; stalk slender, two-thirds of an inch long, in a narrow basin; flesh yellowish white, fine, mild, pleasant and excellent. Ripe during August. Moderate grower, good bearer. Requires a strong moist soil, and high culture to bring the fruit to perfection, and then it is splendid, and the most salable apple of its time in the Boston market.

The apple from which the above sketch was taken, grew in the garden of WM. W. WHEELDON, Esq., of Concord, who not only obligingly furnished the fruit, but the following description:—

The above description by Cole, of this favorite summer apple, (admitted to be the best we yet have among the early kinds,) will hardly enable any one not familiar with the fruit to recognize it. The form varies considerably, but the true type resembles the Porter in shape; and others of them can hardly be distinguished in color or feature from the Sopavine, which is ripe about the same time,—

say the middle of August. The stalk or stem is nearly an inch long, but sometimes very short and fleshy at the base—this latter is an invariable feature, and together with the fleshy *nob*, where the stem is set in, always distinguish it from the Sopavine. It is of a rich *winey* flavor, and generally with fine veins of red running through the white and delicate flesh.

For the New England Farmer.

CARROTS FOR HORSES.

MR. EDITOR:—For two winters past I have fed my two horses upon carrots and hay; commencing with November, and ending about the first of April. During this length of time, I gave very little other grain, for carrots I consider grain, and fully equal to oats. My horses are in constant service on the road; and under this treatment, they usually come out at the end of the “pile” looking better than when they commenced. My dose, is two quarts, morning, noon, and at night four to each horse; they have as much good, sweet English hay as they will eat, and cut, whether fed to them dry or otherwise. This latter, I have always practiced, ever since I have had the management of horses; and I am satisfied, that it is the cheapest and best way, in which it can be given to the horse. There is no

waste, and horses eat it better, and have more time to rest, which is quite an important consideration, where the horse is liable to be taken from the stable at any moment. I am satisfied there is no better way of feeding horses, nor is there any cheaper one—that I have ever tried—than the one here mentioned. If there is, will not some person who *knows* please report? I always cut them quite fine, before using. Carrots are most excellent for horses whose wind is in any way affected—such as the heaves, &c. Those who have tried them for this purpose, will, I think, agree with me in this; if not, just try the experiment and be satisfied. They are usually cheap, compared with other articles of feed of equal nutritiousness. Last year I paid nine dollars per ton, this year eleven, and at the latter price I prefer them to oats—measure for measure.

Patent Office report: "A bushel of carrots, well cut up by a proper root-cutter, is as good as a bushel of oats for a working horse. I have tried the experiment (so have I, Mr. Editor,) fully, and satisfactorily. I have fed twelve quarts of sliced carrots instead of twelve quarts of oats, to a horse, the whole winter, and found no difference in the results. I gave hay with the carrots as we do with the oats."

It is calculated that 276 pounds of carrots, are equal to 100 pounds of good hay, and that 52 pounds of meal or corn is equal to 100 pounds of hay. From these estimates—and I will venture to say, they will be found pretty nearly correct—any person, so disposed, can easily satisfy himself, whether my method of feeding horses during the winter months is not as cheap as any. Where horses are worked and kept in good condition at the same time, if not the best—that is generally the *best* which does its work *the best* and cheapest.

East Weymouth, Nov., 1855.

N. Q. T.

CULTIVATION AND PRESERVATION OF FORESTS.

BY B. F. CUTTER, ESQ.

The first thing to be taken into consideration in the cultivation of forests is the means by which they are propagated, whether from seed or by transplanting young trees. I propose first to notice the propagation from the seed.

The seeds of all the oaks, hickories, butternut, black walnut, beech, chestnut, bass, hornbeam and nettle tree, are ripe, and may be gathered at the first hard frosts of October, and all require the same treatment, viz: they may be planted directly after ripening, or may be kept in some moist place until spring and then planted. It injures all of the above kinds to dry them.

The scarlet and silver maples, canoe and river birches, and elms, ripen their seeds early in June, and should be planted immediately without drying. In good land they will grow from three inches to three feet the first year. They may also be dried and kept.

The sugar maple, white pine, hemlock, spruce, arbor vitae, white cedar, larch, black and yellow birches, ripen their seeds in August and September, and may either be sown directly or dried and kept till spring before planting.

The pitch pine and white birch ripen from November to March, and of course should be planted in the spring.

When seeds are not liable to be destroyed by

birds, mice or squirrels, it is best to plant them in the fall, as that is the time designed by nature; and a moist, shady place is much the best, especially if they are to be transplanted. The arbor vitae, white cedar, larch, spruce and hemlock will seldom vegetate unless they are sown in wet and shady places.

All seed trees need but a thin covering of earth, if the ground is moist; but if the ground is dry, there should be allowance made and the seed covered a little deeper as the ground is drier. One of the best rules than can be given is to follow Nature as near as possible, in the time and manner of planting and also in the selection of lands. All the lighter kinds of seeds, that are scattered by the wind, need but very slight covering, and generally succeed without anything more than the rains will do.

It is a very good plan,—and is the practice in the old countries—to sow several kinds together, as the oak and pine, or the pine and white birch, as they protect each other, and one may come up if the other fails.

The red cedar, mountain ash and the thorn ripen their seeds in the autumn, and require two years to vegetate—they should be gathered and kept in some shady place under ground one year previous to planting.

All the oaks, nut-bearing trees, maples, bass, &c., require warm moist soil, while the evergreens, white birch, &c., will generally succeed on the lightest soil. The white pine probably adapts itself to all kinds of land better than any other tree, growing equally well from the quagmire of our swamps to the top of the highest hills.

If the trees are to be transplanted from the forest, care should be taken to select good, strong, growing young trees from places where they have not been too much shaded—should be taken up carefully and set out as soon afterwards as possible. They may be set at first from 3 to 6 feet apart, and the trees may be of any size from 1 to 12 feet high or more, according to the taste, and care should be taken not to have them set much deeper in the ground than they formerly grew in the woods.

A growth of wood could probably be obtained in this way sooner than by sowing the seed; but the first cost would be much the most. If seedling trees from the seed bed were to be transplanted, I should recommend to transplant them when much smaller; say from 1 to 3 feet high.

The protection of our forests might be all summed up in a very few words, viz.: keep out the cattle, fire and the speculators, and let the birds live, especially the wood-peckers.

Every man knows what would be the consequence if the fire should run through his wood-lot; but it is not every man that is aware of the damage his cattle do to his lot by being allowed to run in it; and any one would hardly be able to make him believe that a herd of cows would destroy more young wood in a few days or weeks than they were all worth, and yet it is frequently the case.

It is probably not of much consequence to say anything at this time about the destruction of our old growth, as it is nearly all gone in this region, but do our best to save the young growth that is left, and let the speculators go for the present.

In regard to birds, it is well known that all kinds, that live in the woods subsist, at times, almost wholly on insects, and it is also very well known by naturalists and others, that all insects are injurious

to trees, hence it should be the duty of every man to do all in his power to save the birds from harm. I have never known but one kind of bird that ever injures a tree, that one is the sap-sucker, a species of woodpecker, which sometimes eats the tender bark; and he, probably, does ten times more good than mischief.

It is thought by very many of our farmers that the forest does best if let alone and not pruned, and as the work has generally been done, this is the best way; but from twenty years' experience in the business, I have come to a different conclusion. I know of no good reason that can be given why a wood-lot may not be as much benefited by pruning as an orchard. Every good cultivator of fruit knows that it injures his orchard very much to let an inexperienced man prune it with an axe, as people generally have done their wood-lots, and the same rule applies as well to the one as to the other.

The method I should recommend to be pursued would be, to thin out all trees that are dead or show signs of decay, and also others where they are so thick as to interfere with each other too much, and to trim off with a pruning-saw all dead and decaying limbs where they interfere. I very much doubt the propriety of cutting off good, thrifty, growing limbs, unless they interfere badly with other trees or limbs of the same tree.

It is frequently said that it does not pay to trim them. It may be so in some instances; but when wood sells from four to nine dollars per cord in our markets, it does not take but a small pile to pay for a day's work. I know of many places near by, where a man may turn out from two to three dollar's worth per day and still leave the lot in a better condition to grow for ten years more, than if not pruned.

In order to have a growth of trees start in good shape, it is necessary to have them very much thicker at first than they can grow when they become larger, and most farmers argue that they will die out and thin themselves best, if let alone, and refer you to the old growth and talk of the clear lumber they make where the limbs have rotted off; but they do not consider that our climate is very different from what it was when the whole face of the land was covered with wood, and that those old trees that made the clear lumber had been 200 years in growing from 1 to 2 feet in diameter; nor that the dry winds now sweep through and between our scattered wood-lots, and have a tendency to preserve the dead limbs from decay, so that they remain on the tree in a dry state and make what the carpenters call pin-knots, so that the only way by which we can have clear lumber, is to prune the limbs off when the trees are small. It is well known to every observing man that the lumber of our second growth grows much faster, and comes to maturity in much less time, than it took for the original growth, and that there is a vast difference in the value of lumber, some of it being more valuable and some of it less—the ash and white pine, for instance—the former being more valuable and the latter less.

In regard to the length of time that a lot of wood should be left to grow, people differ very much; but where wood is for the fire, and dollars and cents are the only objects in view, from 26 to 30 years is long enough. But, if this process were followed out, the question would be asked—where is our lumber for building and mechanical purposes

to come from? and the answer will and must be, let your wood-lots stand longer, and prune and continue to thin out, and you will soon have lumber enough.

In conclusion, it may not be out of place here to give a few instances of the growth of some trees on my own land, to show at what age of the tree we may expect a good sized lumber. I have two white pines, one of which was trimmed about 60 years ago to the height of 25 feet, and a man, who was present at the time, said that it was just the right size to hew for a six inch square stick. The other was pruned 5 years later, and was just about the same size; they stand in thick woods and are 100 feet high, and girt, 4 feet from the ground, 8 feet 3 inches each, and are estimated by good judges to contain more than 1200 feet each of merchantable lumber. Another lot of six trees, where the old growth has, more of it, been cut out, measure 7 feet 7 inches, at four feet from the ground, are not so tall as the others, but grow much faster, as I can remember the time that I could carry off, on my back, the whole of a tree, and my age is 52. Another lot which came from seeds of the first mentioned tree, and cannot be more than 40 years old, are now 60 feet, or more, long, and from 6 to 10 inches square. From the above it will be seen that the trees gain in quantity much faster after they are 40 years of age than they do before.

The study of nature, as seen in the growing forest, is a very profitable and pleasing one to me, and it seems strange that there are not more who pursue and enjoy it.—*Granite Farmer.*

CULTIVATION OF CRANBERRIES.

At the New Hampshire State Fair, Richard Hall of Auburn, exhibited some cultivated cranberries raised in a run not very wet, but bordering upon the high land. His process of cultivation he stated to be this: to remove the surface of the ground some three inches in depth, which in this case was carted to the pig-sty; he then took sand from the shore of a pond, and spread it plentifully upon the ground, and set his vines two feet apart; the second year after this he had a plentiful crop. This was done three years ago, and the vines now cover the ground completely, no grass or weeds being present. He has done nothing to the vines since, and says that the average yield will be, the present year, two bushels of cranberries to every ten feet square. He esteems this the most profitable crop he can cultivate. He has five acres of this land which he intends to appropriate to this use.

When it is considered that fruit is now sold at not less than two dollars a bushel in our markets, this may be considered as farming to some purpose and profit. There are thousands of acres in New England which should undergo the same treatment. By such a course a great deal of wealth would be added to the community annually from the investment of a small amount of capital. Mr. Hall also stated that some cranberries in the immediate vicinity, growing naturally, had been destroyed by the frosts, while those cultivated were not affected in the least.—*Maine Farmer.*

FOOD FOR MILCH COWS.—It is said that a large milking establishment at the North of England, the cows are fed in the following manner, viz:

ninety-one pounds of clover hay, cut or chopped; one pound of salt; one hundred and sixty-eight pounds of brewer's grain; twelve pounds of ground flaxseed. These ingredients are mixed together, and equally divided as the food of twelve cows. The hay, after being cut, is put into the mash-tub and scalded with boiling water. The other articles are then mixed with it. It is asserted that the "average yield of milk, is fourteen quarts, for a period of eight months in succession."—*Am. Veterinarian Journal*.

UNSEASONABLE FUEL.

A few calculations relative to the comparative value of green and seasoned wood for fuel may serve to remind those interested, of the importance of attention to the subject.

Everybody knows that green wood is poor stuff to kindle a fire, though some contend that it will keep up as well as seasoned, if applied constantly, not suffering the heat to go down. That is, if you have a good fire to season it in, you can burn green wood as well as dry. But to the calculations:

A green stick of wood weighing 100 lbs., when seasoned, weighs only 66 lbs., or such is about the average of wood commonly used for fuel. In a seasoned stick you have all the wood—all that will support combustion—you have only got rid of 34 lbs. of water.

Now, water will not burn, and if present in fuel, it has to be converted into steam, at the expense of that fuel, and it will take five times as much heat to make steam of water, as it will, simply to bring it to a boiling point. Here is seen at once, the poor economy of burning green wood.

We have shown that about two-thirds of the weight of green wood is water—now, how many barrels of water is there in a cord of wood? There are 128 cubic feet in a cord, which allowing two-fifths for vacant space between the sticks, leaves 77 feet of solid wood, one-third of which is water—equal to over six barrels of water in every cord of green wood. The heat required to evaporate this water, would bring thirty barrels to the boiling point. And this is not the only expense. If the wood was cut properly, piled and seasoned in the woods, the cost of drawing it would be nearly one-third less. Any way you can look at it—the economy of burning green wood is more than questionable.

Every farmer should look at, and determine to keep a stock of wood on hand, sufficient to last one year, at least. And he may take another look at the difference between wood seasoned just enough, and under cover, and that which has lain out doors until all the sap-wood has become rotten, and one-half its value been lost by exposure to the weather.—*Ag. Ex.*

A THANKSGIVING DINNER.—We have a family in this State, who all dined under one roof on Thanksgiving Day, whose dinner consisted of ten bushels of potatoes, eight hundred pounds of fresh pork, roasted, five barrels of pudding, together with plenty of good bread and pure cold water!

In the evening, the great hall was cleared, a couple of fiddlers were found among the number, and the whole party assembled for a jollification;

the lame and lazy, the halt and blind, the aged and infants, and all graduations between, were there. Many a madam galloped that night that hadn't even trotted for years before, and many an old soldier shouldered his crutch

"And showed how fields were won."

In the midst of their festivity the great bell told the hour of nine, when up went three rousing cheers for their considerate guardian, and in five minutes more, the gay wassailers were dreaming of Elysium on the advent of another Thanksgiving.

HOME PICTURE.

BY MRS. F. D. GAGE.

BEN FISHER had finished his hard day's work,
And he sat at his cottage door;
His good wife, KATE, sat by his side,
And the moonlight danced on the floor;
The moonlight danced on the cottage floor,
Her beams were clear and bright,
As when he and KATE twelve years before
Talked love in her mellow light.

BEN FISHER had never a pipe of clay,
And never a dram drank he;
So he loved at home with his wife to stay,
And they chatted right merrily;
Right merrily chatted they on, the while
Her babe slept on her breast—
While a chubby rogue with rosy smile
On his father's knee found rest.

BEN told her how fast the potatoes grew,
And the corn in the lower field,
And the wheat on the hill was grown to seed,
And promised a glorious yield:
A glorious yield in harvest time,
And his orchard was doing fair;
His sheep and stock were in their prime,
His farm all in good repair.

KATE said her garden looked beautiful,
Her fowls and her calves were fat;
That the butter that TOMMY that morning churned
Would buy him a Sunday hat;
That JENNY for Pa a new shirt had made,
And 'twas done, too, by the rule;
That NEDDY the garden could nicely spade,
And ANN was ahead at school.

BEN slowly raised his toil-worn hand,
Through his locks of greyish brown—
"I tell you, KATE, what I think," said he,
"We're the happiest folks in town."
"I know," said Kate, "that we all work hard!
Work and health go together, I've found;
For there's Mrs. BELL does not work at all,
And she's sick the whole year round.

"They're worth their thousands, so people say,
But I ne'er see them happy yet;
'Twould not be me that would take their gold,
And live in a constant fret.
My humble home has a light within,
Mrs. Bell's gold could not buy—
Six healthy children, a merry heart,
And a husband's love-lit eye."

I fancied a tear was in Ben's eye,
The moon shone brighter and clearer,
I could not tell why the man should cry,
But he blushed up to KATE still nearer;
He leaned his head on her shoulder there,
And he took her hand in his—
I guess—though I looked at the moon just then—
That he left on her lips a kiss.

EXTRACTS AND REPLIES.

SWINE—SHEEP—CUT FODDER—CORN—RYE—
SQUASHES.

MR. EDITOR:—I, as a subscriber of the *N. E. Farmer*, wish to have the following questions answered through the columns of that paper.

1st. Which of the three following breeds of swine are the most desirable for the farmer, the Suffolk, Essex or Berkshire?

2d. What breed of sheep are most profitable for our New England soil; having in view the object of raising both lambs and wool for the market?

3d. What is the best kind of grain to feed to sheep in winter, and how much should each receive per day?

4th. Is it economy for farmers to cut their hay and mix with meal for all their cattle?

5th. What variety of corn is best to plant for fodder?

6th. Which is most profitable to raise for winter fodder—fodder corn or millet?

7th. Is it economy to sow rye in the fall for ewes and lambs to run on in the spring?

8th. What variety of squashes is most profitable to raise for marketing in the fall?

9th. Which is most profitable to raise for stock feeding, carrots or cabbages?

Yours truly, JOHN DIMON.

Wakefield, R. I., Oct. 28, 1855.

REMARKS.—1. The Suffolk is a hearty, quiet and thrifty breed; they grow rapidly, are docile, contented and good-looking. They are well-formed, compact, short-legged, hardy animals, equal in point of value, Youatt says, to the best of the Essex, and superior in constitution, and consequently better adapted for general keep.

The Essex is a breed highly esteemed by some—the best breeds are entirely black, and they will sometimes attain the weight of nearly 500 pounds. Some prize them for their rapid growth and aptitude to lay on flesh, as well as for its excellence.

The Berkshire is also a fine breed, with something of the general shape of the Suffolk and Essex, but quite different in color and the length and appearance of the hair. The skin of the Berkshire is thin, the flesh firm and well-flavored, and the bacon very superior. The Berkshire and Suffolk have been favorably mixed.

We should not hesitate to propagate from either of the three mentioned; we are not aware that there is any decided choice in them. A neighbor of ours, CHARLES B. CLARK, Esq., of Concord, has some of the finest Essex in the country.

2. Some of our correspondents, better acquainted with sheep husbandry than we are, may be kind enough to answer the second, third and seventh questions.

4. There is no doubt among many of our best farmers, that it is profitable to cut all the hay their stock consumes, especially now that we have cutters capable of doing it so rapidly. The saving in overhauling the manure-heap in the spring, is an item

of considerable importance, as it can be done in less than half the time where no long litter is in it.

5. The white and yellow flat southern is generally sown for fodder; some say sweet corn is better. We have no experience with the latter.

6. Millet. It is exceedingly difficult to dry the corn.

8. The marrow squash takes the lead, and the Canada crook-neck comes next. There are other fine squashes, as the Custard and Acorn, but they are not usually raised extensively for market.

9. Carrots. Cabbages are valuable, and answer a good purpose for late fall feeding, but they cannot be stored away in sufficient quantity where they will keep well, to be used through the winter. Carrots, are nutritious, clean, may be compactly kept, and commend themselves in every respect.

HOW TO FILL BLANKS IN CORN FIELDS.

Many farmers, while hoeing corn, carry a pocket of beans to drop in blank hills, which seldom get ripe before frost. I tried an experiment with turnips this season, which did well. The worms having destroyed nearly one-third of an acre of corn, I sowed broadcast, half a pound of turnip seed, (flat English) the last time hoeing, to be washed in by the first rain. The result was 210 bushels of large, nice turnips.

This land was broken up last spring; another piece in close proximity to the first, of the same soil, but plowed in the fall, manuring and after treatment, the same in both cases, did not have one hill injured by the worm. ALEX. PRINGLE.

Ryegate, Vt., Nov., 1855.

ABOUT BEES.

I wish to inquire through the columns of your invaluable paper, as to the management of bees, the kind of hive best adapted to their wants, and the best time to purchase bees, fall or spring?

Ludlow, Vt., 1855.

SUBSCRIBER.

REMARKS.—It would require a long story to answer all your inquiries. The best thing you can do is to purchase *Langstroth's* book *On the Hive and the Honey Bee*, and there you will find every direction you need. The price is one dollar, and may be made to answer for a neighborhood, if it is desirable.

POISON IVY.

R. G. B. recently inquired for an effectual method of destroying poison ivy. I have done it by sprinkling salt upon the ivy; the cattle and sheep, in their eagerness for the salt, completely destroyed it, so that it never again made its appearance.

I wish to state another fact in regard to poison ivy, which, if more generally known, would prevent much suffering, and save valuable time in the haying season. It is this—that the leaf of the white pine is a perfect antidote; let any person who has been exposed to the poison ivy chew a few leaves of the white pine, swallowing the juice, and it will destroy the effects of the poison.

McIndoes Falls, Vt., 1855. J. H. CURRIER.

GREAT YIELD OF POTATOES.

MESSRS. EDITORS:—I have noticed much has been said in some of the papers of late, in regard to large potatoes, raised in various parts of Massachusetts, the present season.

Although not living in so productive a portion of Massachusetts, as concerns agricultural interests, as many, yet we can raise, and do, many potatoes, and some large heavy ones even here, amongst the hills and stones of western Massachusetts.

Let me give you the weight of thirteen potatoes of the "Jenny Lind," or California variety, raised by Mr. Alvan Cross, of this town; weight of the thirteen, 18 lbs. These thirteen are but a fair specimen of many bushels raised by him. These may be considered "whoppers," but Mr. Friend Knowlton has raised *thirteen that weigh 21 lbs.* What may those be considered?

Ashfield, Nov. 19, 1855.

JOSEPH BLAKE.

NEW STYLE CARRIAGE.

MR. EDITOR:—I have a new pattern for an extension family carriage, either on wheels or runners, and as I presume there are many of your readers, like myself, in want of an extension carriage, I beg leave to give them a short description of it through your columns.

The perches are screws, and on turning these screws, by means of a crank, the body and wheels are extended so as to form a two-seated carriage. When it is retracted, it is so constructed that one seat fits exactly into the other, forming a short carriage, occupying the space of only one seat. Numerous competent judges have examined this pattern, and pronounce it the most convenient family carriage ever offered to the public. Any persons in want of a convenient carriage are requested to examine for themselves.

Patented by the subscriber in August last.

B. W. GAY.

New London, N. H., Nov. 19, 1855.

RUSSET SWEET APPLE.

MR. BROWN:—I send you two kinds of apples—are they either of them worthy of cultivation? The red ones I call the African Prince—is that the true name? The russets are seedlings that came up spontaneously. We think them excellent, especially for baking.

Weston, 1855.

G. N. CHENEY.

REMARKS.—The russet sent is an excellent apple, worthy of cultivation on every farm. It is known by several names, the russet sweet, the York russet and the golden russet. We prefer Russet Sweet. The red apples we do not know. There is nothing in their flavor to recommend them.

MILK AND BUTTER.

"Four quarts of milk in October, and six quarts in June and July, will make a pound of butter, in case you procure the right kind of stock." In case you procure the right kind of stock—here is the rule. We remember to have been told, when young, that it was easy to catch pigeons, "when you could lay salt upon their tails, and make it stick there." We suspect this rule about making butter is something of the like character. What think you, Mr. Editor,—your wife makes butter sometimes, does she

not?—if not, the wives of your neighbors do—and they understand this matter, full better than any Editor—be they never so experienced.

REMARKS.—Speaking of "our wife," Mr. Star, reminds us of a remark of hers quite recently upon reading a statement in some agricultural paper similar to the one you have quoted above. Said she, "I have made a good deal of butter with the milk of excellent cows, and my experience is that double the quantity stated is required as a general rule." Extravagant assertions like the one quoted by our correspondent, either act as discouragements to the farmer, or fill his mind with doubts as to the utility of agricultural papers. We do not believe that any stock exists, the cows of which will yield milk that will produce a pound of butter from four quarts, or even six quarts, as a general thing. If these products are only occasional, then they should be stated as exceptions to the general rule. This is one of those agricultural flams which bring discredit upon the exertions of all who are laboring to advance its interests.

POISON IVY ON WET LAND.

MR. FARMER:—If you can tell me of any effectual method of destroying poison ivy on land that is too wet to plow, you will much oblige,
Acworth, N. H., Oct. 15, 1855. R. G. B.

REMARKS.—Who knows how it should be done, and will inform us?

For the New England Farmer.

HOW TO GET FRUIT TREES TO YOUR LIKING.

MR. EDITOR:—In the fall, October or November, take a branch of an apple or pear tree, such as suits your taste, take off down to the third year's growth, cut it smooth and rub it on a red-hot iron so as to scorch and shut the pores of the wood thoroughly; then bury in the ground all but the last year's growth. If placed in good ground, and well taken care of, you will have fruit in five or six years. I have sometimes dipped the lower end in melted rosin, but think burning preferable. I have a tree near my door that is nine feet high and well proportioned, that I took from a graft four years ago; to this rosin was applied, and whatever sprouts sprung up the next summer were bent down and became roots. We can get fruit considerably quicker this way than from seeds, and we know what we have growing, and when grown the whole tree is of the same kind, and whatever sprouts come from the roots in after years can be transplanted without grafting. In case of a drought the first year they should be watered.

TO MAKE MINCE PIES WITHOUT MEAT.

Prepare your pie-crust and apples in the usual way: when seasoned, and in the pie-pans, fill to the top of the apples with custard prepared the same as for custard pie; then put on the top crust and bake; you will have a good imitation of mince-pie in appearance, but in flavor far preferable, although the taste is similar.

State Line, Nov. 6.

JASON BECKWITH.

STALL-FEEDING OF SHEEP.

THE PROFITS OF STALL FEEDING MERINOS AND SAXONS FOR THE BUTCHER.

Mr. J. W. Colburne, of Springfield, Vermont, writes to the editor of *The Country Gentleman*, at Albany, New York, that he, being stimulated by what he had read in that paper of what one of his neighbors had done in the way of stall feeding, had tried his hand at it this past winter, and had kept an account of the results.

In reading the items of the cost of the feed given by Mr. Colburne to his sheep, it will be seen that he reckons the cost of his hay at \$10 per ton, and his corn at nearly double what it is worth in this State under ordinary circumstances. But we regard the fact of these fine-wooled sheep being brought to market in such fine condition, as proving that they may be kept with profit for their mutton as well as for their wool, and showing that there is not the least excuse for any farmer in this State to raise a poor coarse-wooled sheep, unless he is so careless and unambitious that he is willing to let every body else get ahead of him.

This intelligent Vermont farmer says: "I culled one cow from my limited number of four, dried her 1st September; fed with pumpkins and short grass until 20th November; then with corn-stalks, hay, and corn in the ear (ground) until the 22d of March, when I sold her to go to Brighton market, with the following results:

Value of cow on 1st September.....	\$15.00
Grass &c, three cart-loads pumpkins, &c.....	4.00
Hay and other coarse feed through the winter.....	7.00
Corn with the expense of carrying three miles to mill.....	24.00

Total cost of cow when fattened.....\$50.00

Estimated to weigh 1,000 lbs.; sale on foot at the barn, \$72; profits, \$22.

Her blood was three-fourths Native, one-fourth Durham. She was large, and very fat; worth at Brighton, \$7.50 per 100 lbs., which left \$3 for drift, by railroad—just a fair compensation.

I also stall-fed 123 wethers, all of my own raising, four years old last May and June—a cross between the full-blood Spanish Merino and Saxony; very fine quality of fleece—a race which all wool-growers know never attain to a large size. I was offered \$2 per head for them in November, and my neighbors considered it a very generous offer: it was all they could have brought at that time. I commenced feeding them with corn unground on the 24th of November, and followed it without change (except in quantity) until the 29th of March, when they went to Cambridge market, with the following results:

Sale 123 head at \$6.40 per head.....	\$611.80
Value of sheep in November.....	\$246.00
20 tons English hay of good quality.....	200.00
260 bushels of corn at \$0.60 (the market price).....	156.00
Cost of getting them to market by railroad.....	44.28

Profit.....\$161.62
Or a fraction over \$1.31 per head.

It is a satisfaction to the grower to be enabled to say, that these sheep, considering the superiority of blood for wool-growing purposes only, the fineness in texture of fleece, and the number raised and fattened in one flock, were deemed by the sheep dealers at Cambridge, equal if not superior to any ever taken to that market, from any one flock in Vermont.

And now a word as to the manner of feeding. My sheep and cattle yards have open sheds, with

a southern or eastern exposure. Cattle are stabled nights, and mostly stormy days; sheep go out and in at their pleasure; pure aqueduct water in each yard, with a box of St. Ubes' salt constantly supplied, which I consider quite as essential in winter as summer; yards and sheds kept dry by straw and other coarse litter. A large stable connected with my sheep-yard enables me to shut them off when putting hay into their racks, or grain into their troughs, so that they all go to their feed together and share as equally as possible. I commenced this flock of wethers with twenty quarts of corn per day, and from time to time increased gradually as they would bear it, without producing the scours, until they would take 70 quarts per day, with as much good hay as they would eat without waste. It will not pay the cost and trouble to grind any kind of grain for sheep, though it always should be done for cattle or hogs. No whole grain passes the stomach of a sheep undigested. The ewes belonging to this flock of wethers (those of the same year's growth) were sold when two years old to go to Western New York, where I have no doubt they will contribute to the improvement in fine wool.

FORTY DOLLAR PEAR TREE.—Mr. C. A. Nealey, formerly a resident of this town, but now a farmer Eddington, in Penobscot County, hauled into the village last Tuesday morning, forty bushels of pears, and in one hour retailed all of them from his wagon at two dollars a bushel. The pears were of a superior quality, and bought expressly for making preserves. Mr. N. informed us that he gathered twenty bushels of the lot from one tree. We should think that the farmers in this region might take the hint—it costs but a trifle to grow the trees.—*Ellsworth American*.

BOYS' DEPARTMENT.

LAWS AND RULES.

[A few weeks since we gave notice of a little 32mo book, "A Public School Teacher's Letter to a Pupil." The following remarks in this letter, on the subject of rules and laws, we commend to the attention of our young readers:—]

Now, young friend, in order that the school may be thus pleasant and useful, there are various duties for you to perform. I will mention two or three of the more important ones. And

1. You must *carefully regard and cheerfully obey all the rules of the school.*

You know there are, in every family, school, society, town, State and nation, certain rules and laws to regulate the conduct of the members. There can be no happy family, school or community, without such rules and regulations. And these rules must be strictly obeyed to be of any service. To secure this obedience, there are always certain penalties or punishments connected with disobedience.

We have certain regulations and rules in our school, which must be cheerfully complied with, or the school can be neither pleasant nor useful. They are regarded as essential to the prosperity of the school. They are all designed for the good of each scholar and the whole school. They were adopted

for your good as much as the good of any scholar. They leave each one to enjoy just as much liberty and freedom as will not interfere with the interests of the whole. Good laws were never designed to interfere with the rights or happiness of any one, only so far as the highest good of the whole requires. They are intended to protect the rights and happiness of all. These laws and penalties are always *friends* to the good and obedient, but a terror to the lawless and wicked.

Punishment is no part of keeping school, only so far as it is necessary to maintain the rules of the school. If these rules—which, we have seen, are essential to the peace and prosperity of a school—are all complied with, there will never be any such thing among us as punishment.

"Well, my son," said a gentleman to a boy six or seven years old, "do you go to school?"

"Yes, sir, I have been three days, and I haven't been punished once."

And he looked as though he had accomplished a feat that was worthy of his boasting. And why should he be punished? That is no object of going to school, any more than being fined or sent to prison is an object of being a farmer or a storekeeper. What would you think to hear a boy say, he had been on a farm or in a store three days and had not been arrested by an officer once? If he has not been breaking any of the laws of the community, why should he be arrested? And if he should break any of those laws and be punished, the punishment would not be for working on the farm or in the store, but for *crime*. And so punishment in school is for crime—for the violation of rules—not for going to school.

You should remember, young friend, that we must *always* be under laws—laws that will protect us from injury and injustice, and that will also prevent us from doing injury or any injustice to others. If you learn to comply cheerfully with the rules of school, you will find it easy hereafter to comply with the laws of the society, under which you must ever live.

The laws of the land and the rules of school are much like the fences that enclose the public ways. If there is a good road, you never find any inconvenience from the fences that enclose it. You never complain of them as abridging your liberty, and interfering with your rights, and wish them out of the way. When you drive the cows to pasture, you find these same fences of great service, saving you many a run after your straying drove, and also preventing other creatures from coming in from the fields to annoy you.

LADIES' DEPARTMENT.

DOMESTIC RECIPES.

BUCKWHEAT PORRIDGE.—Take a quart of rich milk, and after boiling it hard, stir in as much buckwheat meal as will make it of the consistency of thick mush, adding one teaspoonful of salt and a tablespoonful of fresh butter. In five minutes after it is thick enough to take from the fire. If the milk is boiling hard and continues to boil while the meal is being stirred in, very little more cooking will be required. It should be placed on the table *hot*, and eaten with butter and sugar, or with molasses and butter. This is sometimes called a five minute pud-

ding; it is excellent for children as a plain dessert, or for supper. Some add a seasoning of ginger or grated nutmeg before sending it to the table.

INDIAN MUFFINS.—A pint and a half of yellow Indian meal sifted. A handful of wheat flour. A quarter of a pound of fresh butter. A quart of milk. Four fresh eggs. A very small teaspoonful of salt. Put the milk into a saucepan. Cut the butter into it. Set it over the fire and warm it until the butter is very soft, but not until it melts. Then take it off, stir it well till all is mixed, and set it away to cool. Beat four eggs very light; and when the milk is cold, stir them into it alternately with the meal, a little at a time of each. Add the salt. Beat the whole very hard after it is all mixed. Then butter some muffin-rings on the inside. Set them in a hot oven, or on a heated griddle; pour some of the batter into each; and bake the muffins well. Send them hot to table, continuing to bake while a fresh supply is wanted. Pull them open with your fingers, and eat them with butter, to which you may add molasses or honey.

HOW TO MAKE NO-MATTERS.—This is an article of food which has for many years been confined to the descendants of a single family of this town. Its excellence will commend it to the attention of those housewives who wish to make a good display of culinary skill upon their tables, at the same time having a due regard to economy. The lady who furnishes the recipe has given frequent opportunities of tasting their delicious flavor; and if any are inquisitive, perhaps she might be induced to inform them how the cakes obtained their homely name.

"To three tea-cupfuls of buttermilk add three table-spoonfuls of rich cream, and a small quantity of sugar. Stir in flour until it is of a consistency of paste for doughnuts. Roll out size of a large breakfast plate, and fry in lard to a rich brown color.

"As each cake comes from the fire, cover with apple-sauce made from tart apples sweetened to taste, and spiced with nutmeg or cinnamon, and continue the process till the plate is well heaped."
—*Oxford Democrat*.

NURSERY PUDDING.—Slice some white bread, without crust; pour scalding milk on it; let it stand until well soaked, then beat it well with four eggs, a little sugar and grated nutmeg. Bake in small cups half filled.

USE OF SALT IN COOKING VEGETABLES.—Here is something everybody ought to have known long ago, and that everybody should now read and remember:

"If one portion of vegetables be boiled in pure distilled or rain water, and another in water to which a little salt has been added, a decided difference is perceptible in the tenderness of the two. Vegetables boiled in pure water are vastly inferior. This inferiority may go so far, in the case of onions, that they are almost entirely destitute of either taste or color, though when cooked in salted water, in addition to the pleasant salt taste, a peculiar sweetness and a strong aroma. They also contain more soluble matter than when cooked in pure water. Water which contains 1-420th of its weight of salt is far better for cooking vegetables than pure water, because the salt hinders the solution and evaporation of the soluble and flavoring principles of the vegetables."—*Scientific American*.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. VIII.

BOSTON, FEBRUARY, 1856.

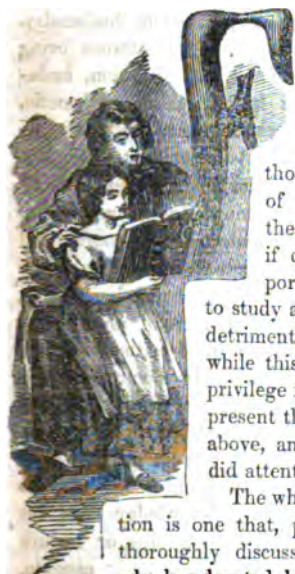
NO. 2.

JOEL NOURSE, PROPRIETOR,
OFFICE.....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

HOW TO BECOME A TRUE FARMER.



ORTUNATELY for the cultivator of the soil, the demands of the winter months are less exacting upon him, than those of other portions of the year. He has the long evening, and, if disposed, can give a portion of the day-time to study and reading, without detriment to his affairs. So, while this season of rest and privilege is passing, we gladly present the topic of the title above, and ask for it the candid attention of all.

The whole subject of education is one that, perhaps, can not be thoroughly discussed, except by one who has devoted his years of manhood and maturity to the task of instruction. It requires a closeness and comprehensiveness, only to be gained by years of labor and experience. Like a question in law, or theology, or politics, it is one on which every head may have an opinion, and every tongue its say. *The education of the farmer* is not so comprehensive as the general subject of education; but it is no less difficult and delicate, and is by no means a business to be planned and accomplished without much and considerate reflection.

Education consists of two parts, or departments; the education of the boy, which is rudimentary only, and goes to the laying of a foundation for the superstructure afterwards to be raised upon it. This is the object of school education. The other department of education is that of the man, which consists in the development, expansion and application of the rudiments. This is effected, first, by a more intimate research into the body of knowledge, of which those rudiments were little more

than the shadow; and, second, by experience and practice in those matters, to which the rudiments apply, and of which they are the index. It is this last department which makes the superstructure, completes the edifice of education. It is this which forms a professional education, which mere rudimentary knowledge is wholly inadequate to do. It is this, consequently, which is necessary to make a scientific farmer. Rudiments will not do it. After passing fifteen years in preparatory and professional studies, from the earliest school lessons to the close of the legal course, half of which is given to college and professional studies, the young lawyer has done little more than lay a foundation for his knowledge of the science of jurisprudence. It is the judicial learning of the *cases* developed in practice that must give completeness to the fabric.

From the above view, imperfectly expressed, the inference would seem to be conclusive that the young farmer is not to receive his professional education, as some speakers and writers have imagined, in the common schools. There is another consideration which presents an objection equally formidable against this plan of education. At the age when the boy is at school, his mind is not sufficiently mature even to comprehend, much less to appreciate and digest, the principles of the vegetable physiology, not so easily seized and appropriated by the mental faculties as those of the animal physiology, from the less obvious operations of the delicate functions of the vegetable kingdom. Neither, if the mind were mature enough, could it, as a first exercise, receive this knowledge, without a well-laid foundation in other parts of knowledge, which it is the object of a common-school education to impart. It is manifest, if the above idea is correct, that the education of a farmer cannot be obtained at a common school, any more than that of a lawyer or physician; — and it is equally plain that a good common-school education is *indispensable* to him, as preliminary to his professional education. It might be added, that the whole time which a farmer's son usually passes at school, would not be sufficient for

the attainment of professional education, unless, at least, to a mature and quick mind, already well-disciplined and stored by a course of preparatory studies.

It is worthy of consideration, however, what studies would be most usefully pursued at the common schools, by a boy who was designed for the business of agriculture, and having reference to his greater accomplishment and skilfulness in that science. To this end, arithmetic and the common mathematics, geometry, and surveying, are particularly adapted to be of the greatest use. Arithmetic, to make him expert at accounts, and in all those calculations which are essential in a well considered plan of farming operations; as well as in the contracts which may be necessary for the improvement of his farm, by buildings or otherwise; in the estimate of profits or losses, in his expenditure, or in his common contracts of sale or purchase. The usefulness of a knowledge of surveying is obvious, in the purchase or sale of land, settling boundaries with his neighbor, or estimating the contents of his tillage or mowing. Geometry is no less so, in the superficial or the solid measures of the material in use by him, or matters coming under his care. But the mathematics and geometry have a more important and general usefulness in training his mind, giving to it that habit of exactness which is of most especial benefit, and essential to the right qualifications of a farmer, more than perhaps of any other, except a lawyer. No other study has such effect in producing this habit, as that of mathematics or geometry. These studies of the common school or academy, we hold to be indispensable in the foundation-work of a thorough farmer's education. And these studies are not only indispensable, but they are enough for a boy of common intellect and common industry to master, in the usual term of a common-school education. To our mind, it would be as sensible for a man to undertake to rear a magnificent edifice on the same day that its foundation is laid, to perform the whole work in both departments of the building in one day, as to perform the whole work of an education so comprehensive as that involved in the sciences pertaining to agriculture, at a common school. Where will the time be found for storing the mind with only the principles of chemistry, geology, botany, vegetable physiology and anatomy, to say nothing of that body of knowledge in details, which it is the part of a thorough knowledge of agriculture to attain; we mean scientific knowledge, which is entirely independent of that understanding of the manual or mechanical operations which is learned by practice only, and which comprises the handicraft of husbandry. In this reference to the studies which should enter into the plan of education of a farmer, we are far enough from presenting the case more unfavorably to the idea of a common school educa-

tion than should justly to be done, by exaggeration, or over-statement of the amount and extent of knowledge that is to be included in such education. On the contrary, we have not undertaken to enumerate all the studies that should be included in a full course of instruction. It will occur to every one who considers the subject, that a study of the laws of mechanics, for instance, is indispensable to making an accomplished culturist, as it is to the plan of any complete education.

The plan of an agricultural school or college, which has also its advocates, offers more promise of usefulness to the student in agricultural science.

There can hardly, indeed, be a question, that a professional school, established for teaching the sciences that have relation to the art of agriculture, similar to the schools of theology, law, or medicine, may be of great advantage in fitting a man for the skilful and well-directed practice of husbandry. At such a school, the requisites for entrance being a previous good common-school education, including especially a good knowledge of arithmetic, (and to make it of the best degree of usefulness, geometry and surveying also,) the student might be initiated into that extensive field of science which makes up the sum of the knowledge of agriculture. Whatever study is to be undertaken in course, and by the methodical and systematic instruction of the school, must be done at such an institution as this, especially designed for the pursuit of professional studies, and instilled into a mind matured by age, and expanded and disciplined by a course of preparatory learning. The mind is a thing of gradual growth, no less than the animal body, or the trunk and branches of the tree. It is more gradual than either. And the mind of the child is less able to receive the higher parts of knowledge than his body is to take the amount of stimulus, or endure the degree of labor of which a man is capable. Such a school might be either connected with a university or separate. The schools for law, physic, and divinity are sometimes connected with a university, and in other cases separate. The course of study at even such a school as this, could not, however, be supposed to finish a scientific education for the farm, only as the studies of the law school are said to complete a law education. It does, in each case, complete the systematic pursuit of the study which is intended for an initiation into the business, by a knowledge of its principles. But the school, and the only thorough one, is business, and the time is the whole of life after the faculties have attained their maturity.

Some persons look with much favor on manual-labor schools. So far as practice can be brought to illustrate the studies of the school, it is undoubtedly of the first importance. In the form of instruction by lectures especially, upon any subject, illustration by material objects or natural or me-

chanical operation, is of the greatest auxiliary use. But if the manual labor is intended as the means of instruction in the handicraft of the farm, it would seem to be a disproportionate means to the object to be attained. It is paying a large price for a small acquisition.

We repeat, that the place for the study that comprises the education of the man, and completes it, is not the school. In the case of the lawyer, it is the office and the court-house. In that of the physician, it is the study and the sick chamber. In the case of the farmer, it must be the *fireside* and the *farm*. And the time is the interval of labor through life. If a man designs to go thoroughly into the study of any particular science, to make himself a master of it, he makes that particular study his business for life, or until he has accomplished it. Such is the mode, and only mode, in and by which, a man masters any science. So Linnæus made himself—and was not made by the school—the greatest botanist in the world; so Herschel, Newton, La Place mastered the knowledge of the stars, and sounded the depths of mathematical science; and so did that son of Massachusetts, Bowditch, in the same department of knowledge, make himself at once familiar with the heavens, and a light to guide the seamen on the deep. The knowledge, such as these men obtained, comprises the education of the man, and is attained, and must be, *by the man himself*, and cannot be imparted by the school or college. The full knowledge of any one or more of the sciences, is to be gained in the same way, and in that way alone. And so is the knowledge which may be necessary or useful in the business of life, to be acquired in the same way.

The particular means of attaining such a knowledge as is desired by the farmer, are books, agricultural papers and lectures. If the difficulty arises, how he shall know, without direction of some person of better knowledge, what sciences he shall study, or what books are the best exponents of them, we answer, that in this age of printing and lecturing, the least inquisitive mind may find the proper direction if it seeks it. It is not easy to imagine any serious difficulty in the case, because a man will be qualified to be his own guide, as soon as his own mind is sufficiently prepared, by cultivation, for the study. Such studies, by a mind unprepared, would be attended with results similar to the planting of corn in a rocky and hard soil, without any of the elements of productiveness first being given to it by the application of the proper dressing and culture. It would be a barren harvest. The reading of the farming papers and hearing of lectures, would prepare his mind for the higher studies of the sciences and create in it the desire for that knowledge. He will soon find from this reading that a knowledge of the constituents of the soil, and of the different kinds of soil, is desirable, and that the science of

geology will show him that knowledge; that it is important to know the peculiar combinations and proportions of those constituents in the vegetable world, and in any particular kind of plant, and that he must resort to books of chemistry to give him this knowledge; and that the knowledge derived from both these sciences would be greatly increased to him, as a farmer, if he knew the structure of the plant, its principles of growth, the operation of its functions in appropriating the aliment within reach, in conveying that aliment to its several parts, and converting it to its destined use in the vegetable economy; and he will understand that for this knowledge he must study vegetable anatomy and physiology. His next step in the progress will be to obtain the best books and to pursue those studies at his fireside, making the illustrations of the doctrine contained in them from the daily works and matters that come under his care. This is the mode in which the farmer must be educated.

If it is not already sufficiently stated, let it be again repeated, that *no education*, either scholastic or professional, is *sufficient* to give him the whole of this learning. There cannot be, from the nature of the case, any school that can *thoroughly* educate a man, in any science. The instruction there obtained must be rudimentary and limited. There is no institution in which Linnæus, Newton, Herschel and La Place could have pursued their studies, to the extent to which they pursued them, nor can there be; nor in which a complete education in any science can be obtained; nor to such extent less than that, to which many persons would desire to pursue the studies necessary to the science of agriculture. Davy, and Chaptal, and Liebig, and Johnson, the teachers in this science, learned it in the way here pointed out—there being no institutions capable of carrying instruction to the point to which they attained. The education of the man is beyond the capacity of the school or college. They can educate the youth:—the man must educate himself in whatever science or pursuit, in whatever department of knowledge he may choose. This education consists both in the practical application of the rudiments learned in a course of study, and in an accumulation of a body of knowledge in detail neither of which can be taught in a school.

WHOOPING COUGH.—The Springfield *Republican* says, whooping cough has prevailed in this city this season to a considerable extent. A very great relief, we are assured upon practical knowledge, is obtained by wearing about the neck a fresh tarred rope, of the size of a bed-cord, covered with a thin ribbon. The aroma of the tar has a wonderful effect in quieting the cough, and preventing the spasms—two very essential items in the management of the disorder.

For the New England Farmer.

ON HARVESTING CORN.

MR. EDITOR:—A writer who signs himself "J. Underwood," whose article appears in your paper bearing date Sept. 15, has disclosed his views of harvesting corn, and I beg leave to differ from him. He appears to be prejudiced in favor of the old way, which, if practiced, will be much loss to the farmer. It is twice the work to harvest corn by first cutting the stalks, for it is less work to cut up corn with the tops on, than after they are cut off; so you save the time spent in cutting, binding and drawing, and then you only save one-third of the fodder, while the other two-thirds is of little value if it stands to dry off and take the hard frosts.

Then again it shrinks the corn when cut at the usual time of cutting stalks, as experiment has shown, one-eleventh part in an acre from what it would to let the corn remain in its natural state, as the wise Creator has formed it; so that there is not only a loss in the fodder, but also in the corn. If we were wholly secure from frosts, the largest amount of corn would be obtained to let the corn remain undisturbed till dry enough to husk and put up.

But the safest and best way is to cut up corn when the husks begin to turn white and cleave open; say one-fourth or one-third of it. There will be but a small portion of shrinkage, and there are many advantages; the corn is much better flavored, and has a rich, sweet taste; it is as much better as wheat, rye or barley, which all admit is better, to harvest when the straw is green. The proper time is when the straw is a bright yellow; in like manner, corn should be cut up and set up when the kernel is first yellow, at which time the fodder is mostly green, unless frost has lit on it. The time varies as to when corn should be cut up; some years it will do in August by the 28th, and so on till the 10th of September. This year it is later here in the highlands of Vermont, where the water runs both north and south. Men are inclined to go upon the extremes; some cut their corn quite too soon; there is a loss in so doing; unless to save it from frosts it should not be cut until it is all turned, and the earliest fit for housing. I think there is a saving, if the corn is of large growth, of the value of from five to ten dollars to the acre, over the old way of cutting first the stalks, and then after the fodder is dry and dead cut up that. My practice is to let the corn stand about one week longer before cutting up than those do who cut off the top.

Roxbury, Vt., Sept. 18, 1855. A SUBSCRIBER.

INJURY TO TREES.—The *Hartford Times* says the thick coating of ice upon the cherry, pear and peach trees has served to protect them from the frost, and at the same time has acted in the capacity of a burning glass, by concentrating and intensifying the rays from the sun, until the unseasonable warmth thus imparted has had the effect of starting the flow of sap, and developing the buds. It is feared the damage is very serious.

SPARE THE BIRDS.—We used to suppose that crows might be regarded as an exception, but we see that this begins to be doubted. The *American Agriculturist* says:—

There is another valuable bird, not mentioned by our correspondent, which has fallen into great dis-

repute with many of our farmers. We speak of the common crow. Perhaps we are too partial to them. We once reared one of these birds, and a more curious or cunning creature we never saw. He became a most incorrigible thief, and was never so gay as when he could get hold of a silver spoon or some valuable article. We used to call him Jack, a name which he understood and responded to as quickly as any child. He had a high contempt of hawks, and when he saw one sailing along he would pursue him, and rising high in air, come down upon him with terrible vengeance. Sometimes in these excursions we would sing out Jack! and though high up, he would wheel around and come sailing down through the air in the most graceful manner, and alight upon our shoulder. In haying time he always accompanied us into the field, and amused himself in hunting grasshoppers; and the number he ate was surprising. Afterwards, he would go and sit on a haycock and allow them to "settle," when he again renewed the war upon this insect tribe. In a year or two Jack disappeared, having been killed, we suppose, through the enmity of some of our neighbors to the crow-kind.

The great objection to crows is, that they sometimes injure young corn; but this may be easily prevented at a trifling expense, and the good they do, is, in our opinion, infinitely greater than the injury.

NEW YORK STATE AGRICULTURAL SOCIETY.

We have before us, the fourteenth volume of the transactions of this Society. It is a noble collection, and raises still higher the reputation of the association, and of its talented secretary.

The volume commences with a description of the new Geological Hall, which the liberality of the State is erecting for the promotion of agriculture in all its various departments. When completed, this Hall will be a monument to the intelligence and public spirit of the State, of which its citizens may justly be proud. Then follows the act passed by the last legislature, to facilitate the formation of Agricultural and Horticultural Societies in the State, the constitution of the State Society, and a list of the life members from its organization.

The report of the secretary, B. P. JOHNSON, Esq., to the legislature, is a model for such documents. Brief in its details, clear in its arrangements, it brings out in bold relief the leading points that have occupied the attention of the society during the current year. Drainage and irrigation, the effects of drought, the ravages of the weevil or wheat midge, the study of the insects injurious to vegetation, special manures, the location of the State Fair, the new building for the Society, and an account of the Fair held at the city of New York, are the principal topics discussed in the report. We should be glad to present the whole of it to our readers, did our space permit. But we must be satisfied with a few brief extracts, remarking, by the way, that it will be a fund from which we may hereafter draw valuable and suggestive thoughts.

The experience of the past season has proved most satisfactorily that thorough draining is the most effectual protection that we know against the effects of drought. By furnishing "far more food to plants, it enables them to strike their roots deeper into the soil, and by increased vigor, to resist much longer the influence of the drought." This fact, in addition to often the demonstrated truth, that it "changes swamps, that have hitherto been a nuisance upon a farm, to most valuable and productive portions," proves abundantly its importance as a means of agricultural improvement.

Irrigation, also, is a means of improvement, which we are happy to know is engaging the attention of Massachusetts, as well as New York farmers. Says one New York farmer, "it is now about four years since I turned a stream of water over about thirty acres of my farm that were conveniently situated for the purpose, and the consequence has been that the yield of my grass and hay crops has been more than doubled, and much of it upon the gravel soil, four times told more than ever before."

Reports respecting the use of special manures should always exhibit, not only the results of the produce raised by these means, but the actual cost of the manure used. Suppose a piece of ground produces 2000 pounds of hay; by the addition of 400 pounds of guano, you get 4000 pounds of hay, you have doubled your crop. But if the hay is worth but \$8.00 per ton, which is the case in large sections of the interior, and the guano costs \$10, does it pay? This is the real question, after all, upon which the question of the use of special manures must turn.

We learn from the report that the Legislature appropriated \$25,000 for the erection of a building at Albany, for the use of the Society. In the museum of this building, it is designed to preserve farm implements now in use in the State and in the country, and which may hereafter be introduced, and a complete collection of grasses and seeds. The insects, also, which are common, will be correctly arranged and named, with the plants, leaves and twigs upon which their depredations are most commonly committed. Choice and rare plants will also be preserved, and their method of culture exhibited. Such a museum must be of immense and constantly increasing value, not only to the State by whose liberality it is established, but to the country at large.

From the treasurer's report it appears that the income of the Society for the year was \$22,546, and its expenditure \$19,982. This munificent sum in the hands of the public spirited and energetic men who have the control of it, has enabled them to produce the results which this volume exhibits. One thousand dollars was appropriated to sustain the labors of ASA FRICH, M. D., the State Entomologist;

and when we learn that the destruction of wheat in the State was estimated at \$9,403,012 85, during the last year, we may well believe that we need to know more of the insects injurious to vegetation, and that liberal appropriations, which tend to increase this knowledge, and our security against their ravages, will be the truest economy. We hope that the incoming legislature of our own State will not fail to make an appropriation to reprint Harris's work on this subject, with such alterations, colored illustrations, and other additions, as he may be called on to prepare for it.

We will occupy no space with the State Fair, as we did this, to some extent, at the time of its occurrence.

In the Horticultural report, a page is appropriated to the Concord grape, and the superintendent of the exhibition says: "All candid men will agree in saying that it is a most valuable addition to our native grapes. Mr. Bull has rendered horticulture a good service by the introduction of this fine grape, and I hope he will be encouraged to continue his experiments in raising vines from the seeds."

The various scientific treatises, prize essays, reports of the several county societies, addresses and discussions in the State House, and at annual meetings, descriptions of farm implements and mechanical labor-saving machines, and reports of individual stock-raisers and farmers, contain matter of very great interest, and show a rapid development of the resources of the Empire State.

And, although there is something—considerable even—which we think may well have been omitted, yet we shall often recur to this volume with the certainty of deriving from it pleasure and instruction.

For the New England Farmer.

RED CEDAR.

FRIEND BROWN:—In riding, both by rail-road and county-road, my observation has been directed to the rapid increase of this tree. In Medford they seem to be covering the pastures, and the roadsides are lined with them. In many towns near the seashore, I think their number is five times what it was ten years ago. If this be correct, it shows that the climate favors their increase. They do not appear to be confined to any particular soil. They grow on rocky hills, and pine plains, on dry and moist, rich and poor lands. But wherever they are the land is enriched by them. Their timber is valuable for fence posts, and rail road ties, and both limbs and boughs are excellent oven wood, either green or dry. Their branches are numerous, and small, extending but a short distance from the body of the tree, and producing a large amount of seed.

Although I have been acquainted with this tree more than sixty years, I have no recollection of seeing a branch broken by the wind, or a tree blown down, or one of any bigness bent by the snow; therefore it is a very safe tree to cultivate on the line of railroads.

My object in writing the above, is, that railroad

stock-holders may think for themselves, whether it would not be well for them to let their "repair men" gather some seed, and sow it on the line of their railroads, thus raising their own posts and ties. Farmers, can you not make a saving, by sowing this wherever you wish for a fence on pasture land? Depend on it, your cows will not eat it up. Gardeners, have you a garden that needs a northern protection? Can you raise a cheaper, handsomer, or more durable hedge, than red cedar?

A. G. SHELDON.

Wilmington, Dec. 24, 1855.

For the New England Farmer.

TO THE READERS OF "THE FARMER,"

LATE OF AMHERST, NOT DECEASED.

"We meet again." Shall we go on longer together? So asks the quondam editor and publisher of the *Farmer*, a journal always upward in its aims, and still aspiring to a higher, broader, more useful life. He must now doff the *pruralis excellentiae*, must no longer say *we*, and must gossip a little less freely in the presence of a new and larger circle of readers; but may yet rejoice to meet his old readers once more, at least, to tender them the cozy adulations of the season, and to ask them *alone*, (other readers having full permission to jump this item,) shall we go on together another year?

If so, please retain this No., and its successors will follow in course. If otherwise, be so kind as to return it to the office in Boston, and its return shall be deemed a refusal, as politely given as has been the invitation; only be sure and get enough out of it to pay you for the postage out, and leave the publisher to take care of the postage back. The return postage need not be prepaid. If any of you prefer the weekly, just say in a brief note to the publisher, with name and post-office distinctly written, "Please send the weekly, instead of the monthly," and your wish will be attended to. If you will take neither, still, a happy new year to you; go ahead; improve your farming; get a better journal than the *New England Farmer*, if you can, but don't try to get along without some good agricultural paper—its no saving, but much lost—remember that:

A few editors, in announcing the present course of the *Farmer*, have spoken of it as "dead," a slight mistake, but no matter—and some have imputed to farmers, in its vicinity, a lack of interest in its welfare. This is a greater mistake, and must be corrected. Farmers in the neighborhood have done nobly—300, 200, 100 and 50 subscribers in a town is not to be faulted. A few remote towns have done the like. But farmers at a distance seem generally to have reasoned, that an agricultural paper from some important business centre would answer their purposes better. They certainly had a right to choose; and no inference should be drawn unfavorable to their intelligence or generosity. Long since, the farmers of the Connecticut valley had fixed upon Boston, as the place, whence agricultural papers, best adapted to their wants, should come. It was hard to turn them out of a beaten track, and perhaps the effort should not have been made. Those of them south of the Connecticut line have now an excellent paper at Hartford, in their own State, and they will do well to give it a generous support.

We have quite enough agricultural papers, perhaps too many. As a general thing, they are not well supported. With their limited means, they cannot do all that for the benefit of the farmer, which, with enlarged means, might be done. Type setting, a leading item in the expense of publication, costs no more for ten thousand readers than for one. Hence, the more numerous the readers, the more value can the publisher give for the same money. Fewer agricultural publications, and better, are the want of the age. We want condensation rather than expansion. The *New England Farmer* has swallowed up the *Valley Farmer*. The latter has lost its name by the operation; but no matter; ladies lose their names, when they get married, but are not *always* sorry for it. If it should swallow two or three more small papers, and "grow by what it feeds on," it would only hasten the supply of a real want of the farming interest. It need not change its name in consequence of the union, for that is just right as it is; nor its manners, for these have always been good; nor would it be quite modest for the writer to promise, that it shall become more prolific of good things for the farmer. He can only promise to represent the Connecticut valley in it, as well as it can be represented by such sort of timber, and to contribute his mite towards making it what its leading conductors are always striving to make it—a sound, truthful, reliable journal, ever *conservative*, and yet *progressive*, occasionally whipping up the loitering on the one hand, and often checking the visionary on the other.

To former readers of the *Farmer*, who will receive the *New England Farmer* in its stead, may it prove a pleasant and useful visitant for the year to come, and as much longer as they see fit to receive it, adding something to their happiness, and something to their wealth, as their reception of it will afford a high gratification to the writer.

J. A. N.

For the New England Farmer.

TRANSIENT BOLT.

HOW TO STOP ITS NOISE.

Passing my neighbor Goodman's yard, to-day, I saw him at work on a wagon, and in a few words he told me how he stops the jingle of the transient bolt on his light four-wheeled vehicles.

He cuts a peice of india rubber from an old fashioned shoe, that will just go round the bolt, and then, placing it nicely down into the hole through the rocker iron and bed-piece, enters the bolt, and has the wagon together again.

He says the rubber will last a number of years. I have noticed that his vehicles run noiseless, except the proper squeak of the axles. They get the best of oil, and talk some.

W. D. B.

Concord, Nov. 28th, 1855.

THE OLD FARMER'S ALMANACK. Established in 1793, by ROBERT B. THOMAS.—Those who try to keep house in this enlightened age without a copy of this old *fireside companion*, must expect to have their pork shrink in the pot and their beans grow hard by boiling! The cook *must* have it, and so must everybody. How could we tell when the sun rises, or the moon, or anybody else, without the *Old*

Furmer's Almanack! How should we know when it rains, or when the plants need watering, or when to get the sleigh out, or to hang the shirts out to dry, if that "jolly old brick" in the title-page, flapping his wings and wasting all the water in his jug, didn't tell us?

Then, to live like anybody, go to Hickling, Swan & Brown's, Boston, and purchase it.

CHIMES FOR THE TIMES.

BY WILLIAM LYLE.

Be not jealous over-much,
But hope and time will make you better;
There is a faith care cannot touch,
Which leaves the soul without a fetter.
O! it is but a sorry creed
To look for nothing but deceiving—
To meet a kindness in your need,
With a smile of misbelieving!
The tide of ill is not so strong;
Man loves not always wrath and wrong.

It cannot be that every heart
Is steeled so much against its neighbor;
Let each with reason play his part,
And fruit will spring from out the labor;
Progressing still life's journey through,
Be just and kind towards your fellow,
Remembering whate'er you do,
That duty spreads the smoothest pillow
And ne'er the hand of friendship spurn,
But trust, and man will trust in turn.

Some men there be who deem it good
In trade to overreach a brotner;
And some who would not, though they could,
Upraise a hand to help another;
They deem not, though convulsions wide
May show the earth by danger shaken,
That still of hearts unjust through pride,
A dark and true account is taken;
Kingdoms may quake and thrones may fall,
But God is looking over all.

O! join not then the strifes of man,
But hourly show by waxing kinder,
That ye have reached the moment when
Reason no more is growing blinder!
And though ye hope that time should yield
A change for each benighted nation,
Seek not at first so wide a field
To fling the seeds of reformation;
But sow them first in hearts at home,
Then trust in God, and fruit will come.

Mark-Lane Express.

INSTRUCTION IN AGRICULTURE.

It appears by a recent catalogue of Amherst College, that the winter term of that Institution will commence on the 9th of January, and is to continue fourteen weeks. Of the large and increasing number of students, several we are glad to see, are devoting themselves to the study of Agriculture, under the direction of Prof. NASH; and there can be no doubt that young men having an eye to the farm, as their field of future action, can acquire, by a trifling expense of time and money, knowledge, which will be of essential service to them through life. Besides instruction in Practical Agriculture, in connection with a liberal course of reading, and a

free use of the geological and other cabinets, there is to be, we understand, during the coming term, a very full and complete course of chemical lectures by Professor CLARK. In chemistry, as taught by experimental lectures, with apparatus ample for illustrating and making plain its difficult points, we have long thought, is the key to many of the farmer's most earnest inquiries; and we should think that this course of lectures alone would be worth more to a young farmer, or one wishing to become a farmer, than the expenses of the whole term.

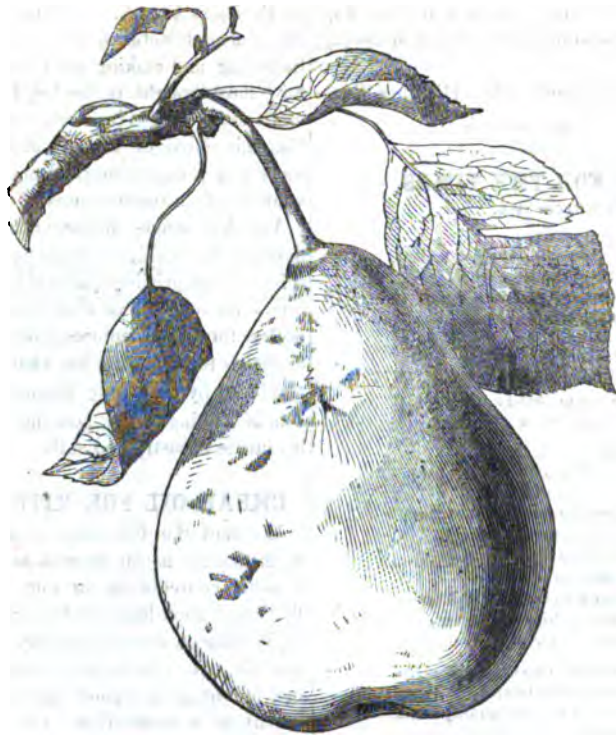
We shall wonder, if many of our young men, who desire to be intelligent farmers, do not avail themselves of the privileges offered by Amherst College; for we do not believe that fourteen weeks and ten dollars for tuition lectures, use of cabinets, and other means for acquiring knowledge, could be better employed by the young farmer, or the young man who is looking to the farm for the employment of his future industry and skill.

CHEAP OIL FOR KITCHEN LAMPS.

We find the following in an old almanac, and think, that, if it will operate as stated, it would be of some consequence in our domestic economy. To keep a good light, at the present high price of oil, is quite an item of expense, and any suggestion that will put us in the way of reducing that expense, and of obtaining a good light at the same time, is worthy of consideration. Oil that could be purchased five years ago for \$1.25 cents per gallon, now sells at \$2, and the dirty whale oil that was then considered unfit for the most common use, is selling now at eighty or ninety cents, and even one dollar a gallon.

"Let all scraps of fat (including even whatever bits are left on the dinner-plates) and all drippings, be set in a cold place. When the crock is full, transfer the fat to an iron pot, filling it half-way up with fat, and pour in sufficient cold water to reach the top. Set it over the fire, and boil and skim it, till the impurities are removed. Next pour the melted fat into a large broad pan of cold water, and set it away to cool. It will harden into a cake. Then take out the cake, and put it away in a cool place. When wanted for use, cut off a sufficient quantity, melt by the fire till it becomes liquid, and then fill the lamp with it, as with lard. It will give a clear, bright light, quite equal to that of lard, and better than whale oil, and it costs nothing but the trouble of preparing the fat. We highly recommend this piece of economy."

FINE APPLES.—We have before us one of MORRISON's incomparable Red Seedling apples, and one of the Red Russet, which Mr. Cole said "seems to be a cross between the Baldwin and Roxbury Russet." It has patches of carmine similar to those on the Hunt Russet, and we know of no other apple which has them. Both these apples are as fine in flavor as in appearance. Mr. Morrison is now testing their keeping qualities.



THE TYSON PEAR.

Last summer we saw a fine tree, and finely loaded with fruit, of this excellent variety of the pear, in the garden of His Excellency Gov. Gardner, at Dorchester. Later in the season we were furnished with an ample basket of the ripened fruit, which we found delicious, and from one among the number we have had the illustration here given sketched.

This pear is not large, perhaps a little below medium size; it has the striking pear form, is light yellow, with russet patches, and reddish in the sun. Stem medial length and set on a point; basin broad and shallow; flesh white, melting, very juicy, sweet, with a delicious aromatic flavor. It is fit for eating in the latter part of August or first of September. By most amateurs it is not ranked high among the good pears, but is worthy a place in any considerable garden. The original tree stood in Jenkinstown, Pa., and the tree on which the fruit grew of which we have been speaking, we have understood to have sprung from the first scion, cut from the old tree, which was set in this State.

WHEN TO WEAR INDIA RUBBERS.—We have noticed that many persons in our city wear india rubber overshoes in cold, dry weather, to keep their feet warm. This is an injurious and evil practice.

India rubber shoes are very comfortable and valuable for covering the feet during wet, sloppy weather, but they should never be worn on any other occasion; their sole use should be to keep out water. They should therefore be put off whenever the wearer enters a house, and be worn as little as possible, because they are air tight, and both retain and restrain the perspiration of the feet. The air cannot be excluded from them, or from any other portion of the body, for any length of time, without sensibly affecting the health. It is our opinion, that no habit tends more to good health than clean feet and clean, dry stockings, so as to allow the free perspiration of the nether extremities.

CURIOSITIES OF WATER.—Nor is the hailstone less soluble in earth than in air. Placed under a bell glass with twice its weight of lime, it gradually melts and disappears; and there remain four parts, instead of three, of perfectly dry earth under the glass. Of a plaster of Paris statue, weighing five pounds, more than one good pound is solidified water. Even the precious opal is but a mass of flint and water, combined in the proportion of nine grains of the earthy ingredient to one of the fluid. Of an acre of clay land a foot deep, weighing about one thousand two hundred tons, at least four hundred tons are water; and, even of the great mountain chains with which the globe is ribbed, many millions of tons are water solidified into earth.

Water, indeed exists around us to an extent and under conditions which escape the notice of cursory observers. When the dyer buys of the dry salter one hundred pounds each of alum, carbonate of soda, and soap, he obtains in exchange for his money, no less than forty-five pounds of water in the first lot, sixty-four pounds in the second, and a variable quantity, sometimes amounting to seventy-three and a half pounds, in the third. Even the transparent air we breathe contains, in ordinary weather, about five grains of water diffused through each cubic foot of its bulk, and thus rarified water no more wets the air, than the solidified water wets the lime or opal in which it is absorbed.

For the New England Farmer.

LIQUID MANURE.

BY PROF. J. A. NASH.

Liquid manuring, as first practiced by Mr. Mecchi, in the neighborhood of London, and Mr. Littledale, near Liverpool, now beginning to be imitated by other distinguished farmers in that country, and perhaps by some in this, is effected by the following means:

An immense tank is constructed in the yard, into which the solid excrements from the barn, sty, fold, &c., are thrown. Into the same tank are directed all the liquid excrements of the premises. Whatever about the building can add to the fertility of the fields, is added; and if purchased fertilizers, whether in the shape of dead animals from the city, or of phosphates, guano, poudrette, &c., are to be used on the farm, they are all thrown together into this tank. It becomes an *omnium gatherum*.

A considerable stream of water—a small brook in some cases, in others a collection of drainage waters from the higher grounds; or a copious spring, if there be one near—is there directed upon them. Water is supplied in such abundance, as to completely neutralize the foul odors that would otherwise be generated. Water, it should be understood, is in all cases a sufficient deodorizer, provided enough of it be used. The great quantity of the water in the tank holds the soluble matters of the various manures there gathered in solution; and when agitated, as it should be before its application to the land, holds in suspension the finer soluble portions of the manures, so that it appears slightly colored by the soluble parts of the manure, and a very little roily, by reason of the insoluble.

Any one will see, that by this time, the quantity of water has become too great to be removed by any ordinary means of transportation. A smart shower, lasting an hour or two, and giving one inch of water in depth, gives about 115 tons to the acre. Such manure requires to be supplied in like quantity every few days, as well while the crops are growing, as in preparing the ground before hand, in order to produce the best results. It is manifest, therefore, that unless some very cheap mode of transportation can be devised, such manure would not be worth applying. To obviate this difficulty, an iron pipe, some two inches in diameter, is laid from the tank, below the frost and below the possibility of being struck by the plow, branching to all parts of the farm. To this pipe hydrants are attached, one to every ten or twelve acres. The

water in the tank is forced into this pipe by a steam power; men in the different fields, with a gutta serena hose, some eighty feet in length, attached to a hydrant, direct a stream of the dilute liquid manure high into the air, frequently fifty feet or more, whence it falls, like rain, upon the growing crops, not beating them down, as it would, if thrown in a solid stream horizontally upon them. This is an imitation of Heaven's way of fertilizing the earth by means of rain, each drop of rain water containing, as this manure does, a few impurities, of which it has cleansed the atmosphere, in passing through it, the impurities, in both cases, being imparted to the soil, as the water passes downward through that.

The foregoing will give a pretty good idea of liquid manuring, as practiced by the gentlemen before named, on a liberal scale, and at great expense for the outset, but with very little, for the subsequent application of the manure. Something like \$75 an acre is requisite for under-draining the ground, procuring and laying the iron pipes, constructing the tank, purchasing the engine and hose, and getting the whole into full operation; but when this is done, the liquid manure can be distributed on any part of the farm, remote as well as near, for only a few mills per ton. Let it be kept in mind, that this liquid manure, being greatly diluted, little differing from rain water slightly roiled, distributes its insoluble parts evenly over the surface, where, under the action of sun and air, they soon become soluble and fit food for plants, thus giving an advantage, with regard to them, over being plowed under, where they might remain a long time inert; while the soluble parts are imparted to the soil at some depth below the surface, as the water penetrates downwards, varying according to the quantity applied at once. If applied often, and little at a time, the effect terminates near the surface; but if applied in very large quantities, it extends farther downward. Mr. Mecchi says, he wants his soil manured all the way from the surface to three feet below; that the roots of crops will go as low as there is prepared food for them; and that liquid manuring is the only means of tempting the roots downward among inexhaustible supplies of earth-food for plants. We are not to infer from this, that he would advocate the plowing in of manures very deeply. That is a different matter. If you were to bury solid manure three feet under ground, you might about as well sink it three miles; for in either case it would be excluded from air, would not ferment, but would remain in a condition unavailable to the plant; whereas, in the case of liquid manure, it is already in a state to be seized up and appropriated to the growth of plants. As some men, who would not swallow pure alcohol, will imbibe it pretty freely, when mixed with three or four times its bulk of water; so plants will recoil from their own appropriate food, if too strong, when they will drink it in like topers, if dissolved and well diluted. We often speak of the food of plants; and yet plants do not eat; they only drink; and it must be admitted that they are not fond of strong drink.

The advantages of liquid manuring seem to be, that it is capable of providing pabulum for crops, in the right state—that of a weak solution; at the right time—just when the plant requires it; and in the best manner—as regards the depth it is to penetrate the soil; and it gives the farmer great power

over his soils and crops, enabling him to adapt the one to the other, to supply deficiencies when they become manifest, and to step in at any time and correct mistakes which he may have made at seed time. The disadvantages are, the expensiveness of the preparation, and a want of capital. To prepare 80 acres for this mode of manuring, if Mr. Mechi's example of doing everything in the most thorough, durable way, were followed, would cost \$6000. If Yankee ingenuity could effect the same object at half the cost—a thing more than probable, and if half the remaining cost could be avoided, by selecting land so porous as to require no under-draining—as with more than half of all the land in New England, still the expense would be beyond the means of the majority of farmers; and there is no use in advising farmers to do what they cannot do. If some retired merchant, who is trying his hand at farming, would be willing to draw something from his easily gotten treasures, for the sake of trying a brilliant experiment, and being applauded or laughed at, as the result might require, it would be well. That miserably poor lands, as were Mr. Mechi's, originally, can, in this way, be made to produce astonishingly, is already settled. It remains to be decided whether this mode of eliciting great crops can be made profitable, and the man who decides it, will do a good thing for agriculture, and, whether laughed at or praised, will be sure to gain notoriety. Who will try it? The writer of this believes he could give the requisite information—how to begin and how to proceed; having examined Mr. Mechi's and Mr. Littledale's works under the most favorable circumstances. But it might be well for the man who would try the experiment, to run over to England and see for himself. It would be worth an Atlantic trip to converse with those men, and to witness their high intelligence and noble enthusiasm in behalf of agriculture. They are men who love Old England, but they love America also, enthusiastically, as well they may, for it is their trade with this country that has enabled them to farm in princely style, and that only for their amusement.

For the New England Farmer.

FARMERS' CLUBS.

MR. EDITOR:—The Farmers' Club is an institution which is destined, I believe, to work a great improvement, not only in the *farms* of New England, but also in the *farmers*. And herein, perhaps, lies its chief value—that it will inevitably call out and exercise the intellect of the members, develop it, make it more active, and give them the habit of thinking more upon the various topics connected with their occupation. It is a school,—a school of the right sort, where the pupils are obliged to look sharply, and with their own eyes, at the various problems set for them to work out. Without claiming perfection for all the theories or opinions advanced in these clubs, it is safe to say that much of good, sound, practical common sense is spoken, and many valuable facts in the experience of the members is developed and brought to light, that might otherwise have passed into the chaos of forgotten things. A man's own experience will be of much more value to himself, even, when he is obliged to analyze it and think upon it, and put it into shape, that it may be seen in all its aspects.

Without doubt, crude opinions are sometimes advanced, and real experiences sometimes so imperfectly understood and related, that they do not teach the truth. All this occurs also among those who are not farmers—among those who are, by themselves and others, considered wise and learned. But the habit of closer observation, which is stimulated by the expectation of being called upon to relate our experiences; the habit of keenly scrutinizing and sifting the theories and practices of ourselves and others, with entire freedom, cannot but aid us in the endeavor after improvement—if in no other way, by giving to our minds an increase of vigor and activity. A man who is thus quickened, must make a more intelligent farmer, a wiser and a happier man. JONATHAN SHORT.

Elm Lodge, Dec. 20, 1855.

For the New England Farmer.

HOW TO KEEP YOUR HOUSE WARM IN THE COUNTRY.

BY HENRY F. FRENCH.

Back Plastering—Double Windows—Cold Air not always Pure Air—Furnaces or Stoves, that is the question—Furnaces for Wood—Air-Tights not necessarily Fatal—Primary School Room in Exeter—Practical Objections to Furnaces—Ventilation the Main Point.

In my former article, on this subject, I omitted to allude to one idea, which is all important. It is this,—if you would keep your house warm, make it tight. In building, see that air, as well as water, is excluded, except through proper openings. The cheapest and best mode of rendering the walls of a wooden house tight, is, by back plastering—plastering between the studs before the usual lathing is put on. This should be done by furring out, say an inch from the boarding and lathing, so as to leave an air space between the boarding and back plastering, and there will be another air space between this and the common plastering, which will be a far better protection from cold, than solid walls of the same thickness, of any material.

Next, to make your house tight, put on *double windows*, upon the rooms usually occupied. They should be made whole, and screwed upon the outside, rabbeted into the window frames, or otherwise nicely adjusted, with one or more panes in each room, hung on hinges for ventilation, unless better means are provided. Then by opening the inside sash, and the single pane of the outer sash, air may be admitted as occasion requires.

These suggestions will, of course, be met, by those who do not think much on the subject, but "only think they are thinking," with the objection that our houses are too tight now for health, and that the very difficulty is that we have not fresh air enough. All this is very true, as to not having fresh air enough, but furnishes no reason for admitting the winds of Heaven through all sorts of cracks, in unlimited quantities. Were one to advise us, because water is essential to health and comfort, in our houses, to leave leak holes all over it, to admit a proper supply, none of us would be

likely to adopt that mode in preference to aqueduct pipes, which we can control as we please. Somewhat akin to this absurdity, is the idea, that, because fresh air is essential, we should allow it to blow through our houses without obstruction.

But there is another consideration, which must not be forgotten, as to double windows. Although glass is, comparatively, a non-conductor, yet a single thickness, of an eighth of an inch, between the temperature of zero without, and seventy degrees within, is an insufficient protection. The glass becomes cold, so cold that ice or frost, as we term it, sometimes forms on the inside of it, even in a room comfortably warm, near the fire; and the air of the room is continually cooled by contact with the glass, without the admission of any fresh air, for no air passes through the glass, though the heat constantly escapes through it. The distinction between cold air and fresh air, must not be forgotten. The cold that comes through the glass, if we may use an expression not quite philosophical, does not purify the air of the room. We are apt to associate the idea of bad air with that of warm air, but a man would die just as soon, bottled up in a glass jar, for want of fresh air, in a cold, as in a warm place.

What we need most to provide for, is, not cold air, but air that has not been vitiated by breathing. In other words, we require a change of air in our rooms, and this not by accidental cracks, left by the unskilfulness of carpenters and masons, but by some systematic arrangement for its admission and escape. The old idea, that, fight as manfully as we may, against the admission of air, enough will somehow get in, must be given up. We can, and for economy ought to, make our houses tight, and as we usually build in these days, they are, with stoves in them, too close for health.

And now, as to the question of *furnaces* or *stoves* for houses in the country. This question does not depend upon the comparative cost of wood and coal, because furnaces are much in use, in some parts of New England, heated by wood. They are frequently constructed of a common cast iron stove, from two to four feet long, with a sheet iron drum on top, all enclosed in a brick chamber, from which the hot air is taken directly, by the usual pipes. This cheap and simple mode of heating is liable to the objection, that usually the stove is heated red hot, and so the air is vitiated before it reaches the persons who are to breathe it. All furnaces are obnoxious to the same objection, in some degree, so far as I know, though I dare say, science has, in theory, at least, obviated the difficulty, and every patentee of a furnace in the land will assure you, that his invention rather improves than corrupts the air passing through it. The theory of a furnace, which shall never be red hot, where it comes in contact with the air that passes to the rooms,

supplied abundantly with fresh air from without, and with water to counteract the drying tendency of the heating process, is unexceptionable. A very large opening from the open air, not from the cellar, as often arranged, is necessary for the supply of air, and corresponding openings by way of ventilators, to allow its free circulation and escape, are also essential. For a furnace designed to warm five or six rooms of ordinary size, the opening for admission of air should be not a mere stove pipe, but a box eighteen or twenty inches square, or perhaps better, two boxes of that size, opening towards different points, to be used according as the wind may blow, and constructed with gates or valves, to be opened and closed by means of cords or rods, from within the house.

Now an air-tight stove, though perhaps more in use than any other, because it furnishes the most heat, at least expense of fuel, is generally regarded as the very worst enemy which we take to our homes and firesides, and as generally managed, is bad enough to deserve universal condemnation, but with proper attention to ventilation, is perhaps as unobjectionable as most furnaces.

The Primary School House, here in Exeter, a plan and description of which may be seen in volume five of the monthly *N. E. Farmer*, affords the best illustration of my idea of the best use of air-tight stoves. It is in full view from my window, as I write, and my children attend the school there. The school-room is twenty-five feet square, and thirteen in height. It has five large windows, not double, exposed on three sides, and accommodates sixty-two children, and it is warmed by a single air-tight, sheet-iron stove, of common size and construction, which stands within about six feet of the chimney at the east side of the room, with funnel enough to go up about eight feet, and thence to the chimney. Under the stove is a large register which admits the air directly from the out-door world. At the west side of the room, there is a ventilator in the ceiling, opening into the attic, which again is relieved of its vitiated air by a copper ventilator on the roof. This simple and cheap arrangement gives sufficient heat in the coldest of New Hampshire weather, and the air of the room, though constantly drawn upon by some sixty little pairs of lungs, for vitalizing their young blood, is so constantly changing, as to give no such indication of impurity, as occurs to you on entering a common air-tight room, inhabited by a single old bachelor and his close stove. The whole secret of the matter is this: abundance of fresh air enters under the stove, and becomes warm as it is drawn up around it. The ventilator in the ceiling at the other end, is not a mere show pipe, such as we see in parlors—a mere little ornamental pretence, but a trap-door about eighteen inches by twenty-four, on hinges, managed by a cord and pulleys. The air

warmed by the stove, passes over the heads of the children, is diffused through the room, and goes out at the top, to make room for more.

This is the best that can be done with an air-tight stove. If the heat be sufficient, as it usually is, I suppose, in a wood stove, to carry off the carbonic acid, generated by combustion, I see no objection whatever to this mode of warming a room. My friend, Professor Hoyt, deserves the credit of this simple but scientific arrangement, as he insisted upon trying it, against my solemn protest, that no such stove could be in any way induced to warm so large a room. The teacher informs me that she usually keeps the register and ventilator both open, and that she is told by the committee that her room requires much less fuel than either of the five other school-rooms in the district.

And, by the way, a visit to this model school, taught by a model teacher, in a room as neat as a lady's parlor, will compensate any of our friends for the trouble of a call as they pass through our village.

To furnaces, for common houses in the country, there are several practical objections, which most of us can appreciate. In the first place, the heat is not equally diffused. The vertical pipes, or those nearly so, take all the heat, at the loss of those which run horizontally. If in a cold day, you keep your register constantly open so as to be very comfortable, the family in the parlor are probably shivering with cold, and you feel as guilty, as if you had appropriated the coats and cloaks of the household for a ride, or pulled off their bed clothing while they were asleep, and so kept yourself warm at their expense. Again, in the moderate and changeable weather of spring, the furnace supplies, on pleasant days, quite too much heat, while in the severest cold of winter, if enough is generated, it cannot be equally diffused.

So far as I can learn, warming by a furnace is far more expensive than by stoves. There is evidently a great loss of heat, by generating it in the cellar, and conducting it in pipes through the house. We thus warm a great many bricks, and a good deal of machinery, the warmth from which never benefits us. Doubtless, this may be in some measure compensated by the philosophical arrangement of the best furnaces. My own house is kept comfortable, by means of a close coal stove in the hall, an open coal stove in the parlor, and wood stoves in all the other rooms, except the kitchen. When I built it, in 1850, I arranged it, so that, if my notions should change, a furnace might be put in.

I have no insuperable objection to furnaces, but am convinced, that no man, who in the country relies on a furnace alone to warm his house, will long be satisfied. He will find, that stoves, or fireplaces at certain seasons, are still necessary. The woe was

pronounced, not against riches, but against *trusting* in riches, and so I think it may be against those who trust in furnaces alone, for warmth in our changing climate.

After all, the point chiefly to be regarded is *Ventilation*. Yankee ingenuity has already furnished abundant facilities for heating our houses at little cost, and whenever the importance of Fresh Air is fully appreciated, the demand for the means of introducing this luxury, which is unthought of because so common, will soon be met by an abundant supply.

For the New England Farmer.

THINGS IN NEW HAMPSHIRE.

MR. EDITOR.—Having recently visited several of the counties in the Granite State. I forward you some of my "pencilings by the way," that you may dispose of them as you see fit. Jaffrey, in the eastern part of Cheshire County, is a pleasant town, having the bald Monadnock on the west, and the Peterboro' mountains on the east. There are two villages, the east and the west; in the former, on the Contocook, which rises in Rindge, are two cotton mills in successful operation, said to be the only mills of the kind in Cheshire County. There is also a school-house, said to be the most perfect of its kind in the State. The structure is of brick, containing below, two school-rooms, with modern and most-approved fixtures. Above, a spacious, commodious and beautiful hall. It speaks well of the wisdom, liberality and correct taste of the people. How can money better be expended than in providing ample facilities for the education of the young?

In the west village is an academy, well-sustained, and a large building for many years occupied as a meeting-house; but now as a town-hall. The frame was being raised on the day of the Bunker Hill battle; when the news of the battle came, so many of the men left for the scene of the conflict, that three days were occupied in putting together the frame.

A short distance westward, the mountain rises with peculiar majesty. It stands an isolated peak, upon an extensive plain rising 3100 feet above the ocean's level. On the north and north-west, the surface gives unmistakable evidence of having been swept over by some current, removing all loose rocks, and leaving deep traces of its course. The second week in October, I found blueberries near the summit, in good condition—also, dwarf cranberries.

The lover of the bold and the beautiful in nature will be well paid for the labor of clambering to Monadnock's height.

The land in this region has been valued mainly for its pasturage. But a blight has come over it, in the shape of the June grass, or white grass. The evil is a most serious one. This grass takes possession of the soil, to the exclusion of all others; it shoots up very early in the season, matures and ripens in June, and the early part of July. When green, cattle do not like it; dried, it is not only offensive, but very injurious to them. From the first of August the pastures look as though a severe drought had passed over them, and animals are compelled to resort to the swamps, canebrakes and forests for sustenance. How to remove the evil is

a serious question. Could the land be tilled, the difficulty might be obviated. But not an acre in twenty is susceptible of cultivation. The same difficulty is experienced in Massachusetts, especially in portions of Franklin, Hampshire, and Worcester Counties. Will you, Mr. Editor, or some of your correspondents, suggest a remedy? Or, must these lands be abandoned, and the possessors go West in search of better?

The tide of emigration, westward, is making heavy drafts upon the grazing districts of New England. The late census shows that the increase is confined to the cities and manufacturing districts, while the "hill country" has been making a decidedly down-hill movement. Whereas, formerly, Vermont and New Hampshire supplied our cities, and manufacturing towns with butter and cheese, and our mills with wool, they now do but little toward it. In almost every part of the State, I found a New York cheese; and to see a sheep it was necessary for me to go as far out of my way as John Randolph was willing to travel for the privilege of *kicking* one.

Agricultural papers and fairs have done much to awaken interest and diffuse information touching the best modes of tilling the soil. The aggregate products of cultivated land in New England have been very considerably increased. The same is true of the orchard. But for the hill-side, the "summer pasture," I have yet to learn that anything effectual has been done. This latter embraces about one-third of all the productive land in New England. Is there no way to renovate it—to save it from utter worthlessness?

R. B. H.

URATE.

This fertilizer has not been very extensively used, as yet, in our country, and few are aware of its nature, or the process by which it is formed. Every one must have noticed on entering a stable, or other place where horses are confined, a very peculiar and pungent odor, often affecting the eyes, and sometimes the throat, and creating nausea. This offensive principle is ammonia, one of the most powerful, and—contemplated in an agricultural point of view—most valuable of all the gaseous products of vegetable decomposition. Now if we sprinkle common gypsum, or pulverized plaster of paris, we shall economize this volatile substance, and bring it to a condition readily available as a substance for plants. In its fertilizing character and properties, it is similar to *urate*, but not strictly the same.

It is asserted by manufacturers that from three to four hundred weight of urate form an ample dressing for an acre of wheat; but how much better would it be for the farmer to economize the liquid voidings of his domestic animals, in the manner here described, and apply it to his crops of hay, grain and roots, as his necessities or wants may require. All urine is rich in the food of plants; the urea and salts are all highly valuable, and no one who rightly reflects upon the subject, will willingly suffer it to be lost.

Another article of much value in economizing the liquid voidings of animals is sulphuric acid. It should

be first diluted, say one gallon of the acid to one and a half gallons of water, and sprinkled over the manure heaps, or floors where animals are confined, every morning. Urine, in its fresh state, does not evolve ammonia; it is only when in the putrifying or fermenting process that this gas is given out or eliminated. Pulverized charcoal, and a solution of copperas, are also valuable, used for this purpose.

By attending to this matter the farmer may easily save a large amount of his richest fertilizers in a single season. His lands will be all the richer for it, and repay him liberally for all the trouble and expense involved.

For the New England Farmer.

FEEDING STOCK.

[Extract from the Records of the Concord Farmers' Club.]

* * * E. Wood, Jr., asked the opinion of different members, as to how much hay it would take to keep a cow in good condition for the winter season of 26 weeks?

E. W. Bull thought it would require from 2½ to 3 tons.

C. W. Goodnow said he had fed to his cow about 2½ tons, commencing before the middle of October, and ending early in May; but thought he might have wasted some by his mode of feeding.

James P. Brown thought 1½ to 2 tons would be sufficient.

James A. Barrett said his father once fed a certain quantity of hay to fifteen cows, and they averaged 22 pounds a day, equal to 3960 pounds in six months; and they had, at the same time, three quarts of meal or shorts, or two quarts of shorts and one quart of oil meal each, daily.

E. Wood, Jr., said a cow giving milk would eat as much as an ox. Different farmers in town had told him that cows would give as much milk if fed on meadow hay, as on English hay—and he was now trying the experiment of feeding his cows with meadow hay and oil meal. During the past week he had weighed the hay consumed by fifteen cows in five days. The hay was cut and mixed with the oil meal. The cows averaged 16½ pounds of hay, and 4 pounds of oil meal, daily. Reckoning the hay at \$13 a ton, and the oil meal at \$43, the weekly cost amounted to about \$1.35 for each cow. These 15 cows gave, in the five days of trial, 97 quart cans of milk; or about 8 quarts, each, daily. The whole cost of feed, was, for the five days, \$14.39; 90 cans of milk at 30 cents are \$27; nearly \$13 more than the cost of feed. He mixed 4 quarts of oil meal with 31 pounds of hay, and he thought the cows would eat it better than if mixed with 12 quarts of Indian meal. It takes 5 pails of water to moisten the 31 pounds of hay, and 4 quarts of oil meal. He thought one quart of oil meal was as good as 2 quarts of Indian meal to produce quantity of milk. But if he kept only one cow for his family use, he would give Indian instead of oil meal. He believes cut feed is the cheapest way of feeding any stock. He uses Gale's cutter; cuts up his corn butts, moistens, and mixes oil meal with them—and the cows eat nearly all. He would cut them if the cattle did not eat them better, on account of the greater convenience in forking over the manure in spring.

E. W. Bull said, if cows are supplied with warm water and food they will make more milk. He recommended frequent changes of food. Fed on well-cured corn fodder, cows will give more milk than if fed on the best of English hay.

James A. Barrett said, a neighbor of his thought, when feeding his cows on green corn fodder, that they gave more milk, but not so much butter.

At the next meeting, E. W. Bull said, that since the last meeting he had fed his cows partly with meadow hay. He got as much milk, but it was not so good-flavored. The unpleasant flavor was, however, easily removed by scalding the milk. But an important question remained, which could not be answered without a long-continued trial—will the meadow hay sustain the cow in good flesh as well, or nearly as well as English hay?

James P. Brown had also, since the last meeting, fed his milch cows with meadow hay, cut and mixed with shorts and oil meal. His cows did not give so much milk; as when they had English hay and the same quantity of meat in a swill.

For the New England Farmer.

GARDEN SOILS.

A good garden may be made by skilful management, upon almost any soil. But the results will differ somewhat according to the nature of the soil; where the soil is a moist, heavy loam, resting upon a clayey subsoil, crops cannot be obtained as early as upon a different soil. But by tillage adapted to the nature of the soil, large heavy crops may be obtained for fall and winter use. Upon such soils only one crop can generally be obtained, in a season. Such soils should be well drained, and cultivated in beds or ridges, so that the surface water may be conducted off, and not be permitted to injure land already sufficiently moist. Horse manure is the best dressing for such soils, when cultivated as a garden, and should be liberally supplied, and well plowed in. Such land is apt to bake and become hard; consequently it requires to be frequently stirred during the growth of the plants. Such a soil is well adapted to the growth of pears and quinces.

When it is an object to obtain early crops, as in the cultivation of market gardens, a light, sandy loam is preferable. When such a soil is made rich by high cultivation, the crops are earlier, more sure and the soil is more easily worked. Many of the most productive gardens in the neighborhood of Boston are made upon light sandy plains that were previously exhausted by cultivation without manure, and that have been redeemed by judicious management. The plow is put in as deep as it can be made to run, and the whole of this depth is made fat by liberal supplies of warm, stimulating manures. It is an important object with market gardeners to get early crops, and they are able to get them in such a soil, two, three and four weeks earlier than in a heavy loam. This gives them a longer season, and by a skilful management of successive crops, they get two or three crops in one season. Apple trees succeed well on such soils. When the ground is enriched by high manuring and the cultivation of hoed crops, the trees grow rapidly, and come into bearing some years sooner than in a colder and heavier soil. They start earlier in the spring, and, of course, have a longer sea-

son to grow, and the wood which they make becomes better matured and prepared to endure the cold of the ensuing winter.

In such soils, fall sowing is often practised to advantage. Onions, beets and lettuce are sowed in September and covered with salt hay, rock weed or meadow hay; the mulching is removed early in March, and the ground between the rows stirred, and onions and beets are thus obtained for the market in June, or early in July. Vegetables at this season command nearly double the price that they do later in the season. Three crops are often obtained from the same ground. A portion of ground is plowed as soon as the frost is out, and a heavy dressing of horse manure is plowed in. Early peas are planted in rows perhaps five feet apart; then radishes are sowed broadcast, and raked in. The radishes are pulled before the peas are all picked. Between the rows of peas are planted at proper times, squashes, melons or cucumbers; by the time the vines begin to run, the radishes and peas are removed from the ground, and the whole surface is left in possession of the vines. Early potatoes are taken off in July and the early part of August, and a full crop of turnips is made to follow. Or after peas and potatoes, onions and beets are sowed for the spring market. After lettuce and radishes, cabbages are set for fall use. Many such gardeners start vegetables in hot-beds under glass; thus they obtain potatoes, tomatoes, cabbages and cucumbers some two or three weeks earlier than by open culture, and the increased price amply repays them for the outlay of capital and labor.

Strawberries succeed admirably on such soils, especially if in addition to high culture, irrigation is employed. Some of the strawberry gardens in the vicinity of Baltimore, consisting of from ten to one hundred acres, are made of worn-out sandy land, which has been redeemed by cultivation. One gardener in the neighborhood of Boston, receives more than three thousand dollars annually for the vegetables and fruit grown upon twenty-six acres of such land. His proximity to a ready market, and to an abundant supply of manure, are circumstances which contribute greatly to his success. But high culture, and a skilful arrangement of successive crops are the essential conditions of his prosperity. I do not believe he would make as much money in proportion to his outlay, in the cultivation of a heavy loam, although the soil is in itself much more fertile. Early crops could not be obtained on such a soil, and these are a chief source of profit. Apples would not succeed as well as on a lighter and more sandy soil. From four Porter apple trees on such a soil, apples have been sold to the amount of more than a hundred dollars in a year. This to be sure is an extraordinary product, and was owing to the superior quality of the fruit; but under such culture on a sandy soil, Baldwins, Greenings and Russets will yield from four to five barrels to a tree, worth from two to four dollars a barrel. On such a soil peaches and plums thrive better than on any other, and bear full crops in four or five years from the stone.

Let no man say he cannot have a good garden, because he has only a piece of poor sandy land. On such land, he can have earlier crops than his neighbor who has a deep, rich, moist loam; and if he does not have so heavy a crop, he can have two to his neighbor's one. Plow early and deep, and put

on manure with a liberal hand, and you shall have a luxuriant garden, where you have now an unproductive and barren patch.

AGRICULTURAL SOCIETIES.

Transactions of the Worcester North, for the year 1855.—A well printed pamphlet of 84 pages. Before noticing its contents, we call the attention of the officers of the Society, to what we consider as an important omission in the account of the transactions for the year;—and that is the entire absence of any account, whatever, of their Fair or Exhibition. Indeed, from this "History of their Transactions," we do not learn that they had any annual exhibition, or that the farmers, with their products, assembled at any time during the year, for any purpose! Did the members of the society dine together, and if so, where, and who were their invited guests?

Now, in all these associations, it is not so much for the public to learn that twenty members took premiums for orchards and for plowing, and as many more for poultry and butter and choice fruit, as it is to learn, through what particular skill they gained them, and what effect the operations of the Society have had upon their practices in husbandry, and upon their industrial condition. The whole spirit of the thing should be summed up in the few first pages of what purports to be a history of the transactions for the year.

There are several excellent reports in this pamphlet, on Stock, Fruits and Flowers, Grains, Root Crops, Orchards, Manures, &c.

The following extracts are taken from the report entitled, "Fruits and Flowers"—though the flowers, after diligent search, cannot be found. We are glad, however, that the *idea* of flowers was on the mind of the committee, even if they have reported nothing of them. We have often expressed our own opinion of the notion that too much fruit is now under cultivation, and now introduce this committee, with their excellent report, to confirm us.

"It has been estimated, by one well qualified to judge, that the sales of trees throughout our Union, amounts in value to upwards of a million of dollars annually; and the amount increases with every season. Nurseries have been drained of every thing worth cultivation, and very much of that which was worthless. So great, indeed, has been and still is, the mania for tree planting, that well informed persons have expressed fears that the whole matter of raising fruit, with the view of profit, would be 'run into the ground.' That fruit would become so common, that the markets would be glutted, and that as a speculation in the hands of the producer, it would prove an entire failure.

"Let us consider, for a moment, how the case stands at the present time. Are we really in danger of becoming surfeited with an over-abundance of good fruit? Has our experience during the past few years been such as to justify this conclusion?

We think not. So far from the market being over-supplied, there are very many people who have never even tasted of some of our finest varieties of fruit. They are not as yet produced in sufficient quantities to get into the markets at all. This is true of even our staple fruit, the apple.

"But it may be said that among the millions of trees that have been set within the last five or ten years, but a small number have, as yet, produced fruit in any quantity, and that until the majority of them began to bear crops, the effect upon the market will, of course, be hardly felt. We are not, however, of that class who indulge fears of this nature. We are unable to believe that the better qualities of fruits will ever be purchased, unless, as an occasional exception, at prices which will fail to handsomely remunerate the intelligent producer for his outlay and trouble; and we are strengthened in this conviction, while taking a survey, and learning the history of a large portion of the trees which have been set within ten years past.

"We might estimate, in merely an approximate way, the value of the annual growth of a tree, something as follows:—

First cost.....	35 cts.
First year's growth valued at.....	10
Second year's.....	20
Third year's.....	30
Fourth year's.....	45
Fifth year's.....	60
Sixth year's.....	80
Seventh year's.....	1.10
Eighth year's.....	1.60
Ninth year's.....	2.00
Tenth year's.....	2.00

\$10.00

"By this estimate, the value of a tree in ten years from sitting would amount to \$10.00, which for an apple or pear, cannot be considered as too high. Because at this age such trees well cared for, are generally in a condition to produce a crop, the average annual value of which is sufficient to pay the interest on a much larger sum, in fact often to ten times this amount. What more profitable operation then can the farmer pursue than to bring a portion of his lands into orchard. Even if he is a man that looks at the present entirely, the annual increase in value of his farm, in consequence of the accumulation of fruit trees, will always command a price more than enough to cover the whole expense.

"To every man, then, we say, plant fruit trees, but what is of more importance, cultivate and care for them with the same zeal that you bestow on any other crop, and you will be sure of a return that will fill you heart with satisfaction and your purse with something useful."

ON GRAIN CROPS.

"The Committee take great pleasure in noticing the increasing interest felt by many of the farmers of this society in the cultivation of grain, more particularly wheat and corn. It is often said that wheat is an uncertain crop, but for a few years past the coffee-wheat, so called, with good cultivation, has never failed of giving a good crop. There may be other kinds as good, and when we can raise it for one dollar per bushel, or less, we think it ought to be more generally cultivated. It cannot be said of Indian corn as of wheat, that it is an uncertain crop, for with good cultivation we are sure, nine-

teen out of twenty years, of a bountiful harvest. On this grain the farmer mainly depends to fatten his beef and pork, and to give strength to his animals for labor; and what could the farmer himself do without a good supply of Indian bread and pudding to give him strength for the labor of the farm? It is often said that we cannot raise corn on our rough farms for less than one dollar per bushel, which we think is not true. The average cost of the corn offered in this society for premium this year, is not far from fifty cents per bushel, and we think that with the use of labor-saving implements and a bountiful application of manure, it can be raised at from fifty to seventy-five cents per bushel, generally, which at the present prices leaves a good profit for its cultivation."

Jabez Fisher's Statement.—The acre of corn which I enter for the society's premium, was planted upon a moderately strong loam, resting upon a clayey bottom. Its slope was toward the south and east. Cultivated last year for sweet and fodder corn. Plowed twice during the third week in May, ten to twelve inches deep. Manured broad cast, previous to plowing, with 14 loads, containing 4½ cords, of the following compost. Of the clear droppings, solid and liquid, of 1 horse and 7 head of neat stock, 4 parts, wool waste 1 part. Corn of the King Philip variety was sown May 26th, in drills 3 feet 8 inches apart; the stalks at gathering, averaging 7½ inches distant from each other in the row. Manured in the drill with hen manure, worked fine with loam. Hoed twice with the horse hoe, followed by the hand hoe. Culture entirely flat. Stalks were cut up whole Sept. 24th, and stooked on the field. Husked the last week in October, and yielded 6640 pounds of ears, or 41½ pounds to the square rod. The whole amount of soft corn was less than a bushel, of which I make no account. One acre of land in account with Jabez Fisher,

	Cr.
By 92 2-9 bushels, 72 pounds each, of sound corn at \$1.12½.....	\$108.75
" Fodder.....	15.00
" Unexpended manure 2-5 of the whole.....	14.00
	Dr.
For interest and taxes.....	\$6.95
" Plowing twice.....	4.00
" Cultivating and furrowing.....	1.00
" Compost manure.....	27.00
" Hen manure.....	8.00
" Carting and spreading.....	3.00
" Planting and seed.....	2.00
" First Hoeling.....	8.30
" Second Hoeling.....	3.20
" Cutting and stooking.....	3.15
" Storing and husking.....	9.00
" Balance, being net profit per acre.....	62.25
	\$132.75
Cost of production of corn per acre.....	\$41.50
" " " " per bushel of 72 pounds.....	.45
Profit per bushel.....	.67½

We wish the report on *Gardens* had been more fully considered and detailed.

ON ORCHARDS.

The committee say—

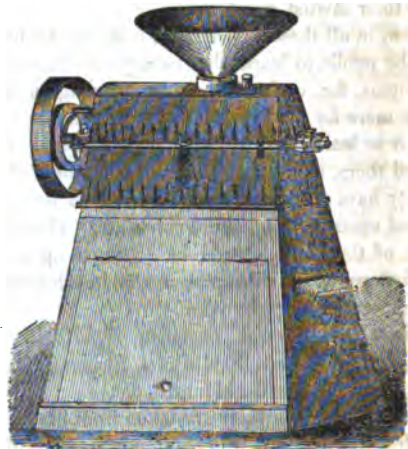
"Mr. Brooks' trees (JOHN BROOKS, Esq., of Princeton) have been injured by the borer, and we think by the potash water. He has, however, taken the best method known to eradicate the first evil—and with a good will—and has resolved to make his liquor a little weaker, if he does not abstain from the 'critter' altogether.

"Our examination of their several orchards has convinced us that potash, as a wash for trees, should be used with more caution than is generally used. The orchard of Mr. Works was injured, we think, very much by the potash with which he washed his trees, and Mr. Works agrees with the committee in that opinion."

In speaking of the orchard of Mr. Enoch Caldwell, of Princeton, the committee say—

"When the committee were on this lot, the question came up as to the value of such trees, and it was the unanimous opinion that \$25 each was not above their value. Is not this an inducement, in a pecuniary point of view, to plant good trees well, and on good ground, well located, and after, cultivate well?"

We regret that in this statement they did not give us the age of the trees.



SCOTT'S GRAIN MILL.

This is a small mill, with bolt, and we are assured will grind from 4 to 10 bushels of corn, rye, wheat, &c., per hour, according to the power applied. A considerable number of them have been sold by the Boston agents; and we understand that in every instance they have given entire satisfaction.

Samuel Cooper, Esq., and W. P. Parrott, Esq., of this city, examined it when it was in operation at Gore Block, during the exhibition in October and they say that they "feel safe in recommending it to all those requiring a cheap and efficient mill."

The highest premium was given to it at the above-named exhibition. The mills are complete, ready to attach a belt, and cost \$55. They are sold in this city by Messrs. Parker, White & Gannett.

THE AMERICAN FARMER.—Kalamazoo, Michigan, E. PORTER LITTLE, publisher.—This is a weekly paper in common newspaper form, well printed, with handsome type. Our western friends seem determined to progress as fast as the rest of the world in all the substantial of life.

STORING ROOT AND OTHER CROPS FOR WINTER.

Since the increased culture of root crops, their modes of preservation have become important, as many crops bear higher prices later in the season than in December, while others, if badly stored, are rendered of comparatively little value. The strap-leaf red-top, and other kinds of white turnips, are among those requiring the greatest care, for if stored in too large bulk, without proper ventilation, they become pithy in a short time. Many methods are appealed to, but the one which we have found successful, is to place a ridge of turnips on the surface of the ground, three feet wide at the base, of any required length, and forming a point at the top like the letter A. This should be covered with soil dug from the sides, so as to leave a flat fourteen inches wider than the heap, and surrounding it, thus leaving a ditch around the pile to prevent the admission of moisture to the base on which the turnips are placed. The first covering should not be more than four inches in thickness. On top the heap, at distances not greater than five feet, tufts of straw should be placed, which will leave holes for ventilation, suffering the escaping moisture to pass off during the sweating of the turnips. When the weather becomes more severe, more dirt may be thrown on, until the whole thickness is twelve inches, which will prove entirely sufficient for the severest weather. If the turnips are slightly sweated in this heap before being covered, and are permitted to dry off before covering, they will keep sound until required for use. The end of the heap may be opened, and this should have a southern or south-western exposure. As the turnips are removed, the exposed portions should be covered with straw. Carrots, beets, and ruta-bagas, may all be preserved in this way.

In soils that are very dry and sandy, and thoroughly under-drained, pits may be dug so as to place the roots below the surface of the ground. They may also be kept in cellars covered with dry sand and properly ventilated. Carrots should be compactly stowed, with a small amount of earth between them. Where roots can be placed under sheds, a covering of dry charcoal dust will be found sufficient for their preservation, although the side of the shed may be open to the weather.

To preserve apples, they should be placed in heaps, and covered with planks or straw to induce sweating; this covering should then be removed, and the air suffered to pass freely among them. They will lose eight per cent. of their weight without shrinking in size. In about six weeks the second sweating will occur; and if the atmosphere should then not be as low as the freezing point, the second drying will prepare them for being kept in safety by any of the ordinary methods. Indeed, if shipped immediately after the first sweating, provided the apples be not bruised, they will keep for a voyage of five weeks, and on the sixth week the sweating will again commence, and if not properly aerated, decay will rapidly follow. The object should be to keep them as near the freezing point as possible, but always above it. Delicately flavored apples should never come in contact, directly, with the soil; for if it contains much clay, or carbon, it will abstract the aroma of the apple, and render it comparatively flavorless; indeed, it will often impart a ground-like smell and taste to fruits. The root crops are not so injured.

Parsnips may be preserved in the manner named for turnips; but it is only necessary for the purpose of keeping them clean and free from rains, as freezing does not injure this root; indeed, they are not fit for use until they have been frozen. Market gardeners usually leave part of their parsnips in the ground for their early spring sales, and those that have been thus exposed all winter, are sweeter and better than those dug in the fall. The property of the soil for extracting odors is so great, that a fishy duck buried in it over night may be cooked next day, and will be found to be free from this objectionable flavor. Dry cod-fish is often ameliorated in flavor by such treatment. Indeed, the clothes of those who have died of the plague may be worn by others, without the fear of communicating disease, after they have been buried in the soil a few hours.—*Working Farmer.*

For the New England Farmer

ESSEX AGRICULTURAL SOCIETY.

TRANSACTIONS FOR THE YEAR 1856.

This *Annual* is again before the public, in a neatly printed pamphlet of about one hundred and fifty pages, from the press of Messrs. Huse & Co., Newburyport. From a cursory glance at its contents, I think it will be found not less interesting than those which have preceded it;—and I know of no publication that is perused with more instruction. It emanates from the people, and contains intelligence of a practical character. If the farmers of the county had been as mindful of their own interests, as the officers of this society are for them, they would long ago have improved their knowledge of their honorable occupation. The truth is, farmers are slow to engage in new things. Their fathers have gone along through the world tolerably well, and they think they can get through by following in the same tracks—notwithstanding it may go round the swamp, and not across it. Farmers are not fond of railroad speed and lightning conductors—they hold that the sure way is the safest in the end. They may be right in this—but such is not the order of the day in other things;—and one may as well be out of the world as out of the fashion.

Great credit is due to the secretary, for looking up, preparing and putting forth such papers, and only such as will be found worth reading. What astonishes most is, that notwithstanding so much has been said and written on the culture of the soil, there is always something new to come. Essex is not a stock-growing county, and cannot be made such, any way you can fix it. We have no large herds of Devons, or Jerseys, or Ayrshires, or Durhams, here, or interested editors to puff them. A few independent gentlemen keep a few fancy animals for their own use, but the mass of the animals, like their owners, are of the homespun order. Nevertheless we have seen as good butter in Essex, as any where else, notwithstanding it takes two gallons or more of milk to produce a pound.

ESSEX.

☞ Oats take from an acre of land, ninety-six pounds of silica, or sand, twenty-two of phosphoric acid, six of sulphuric acid, twelve of lime, nine of magnesia, thirty-six of potash, four of soda, and six of common salt.

For the New England Farmer.

CLIMATE MAKES THE PEOPLE.

MESSRS. EDITORS:—In passing through one of our American cities, especially the more southern ones, the traveller will be struck with the great variety of features he meets with in the streets; he will see every hue of complexion, from the ebony to the pallid white, as well as every degree of ugliness in features and form, up to fine symmetry and beauty; on inquiry, he will find that every nation on the globe has its representatives among the busy throng, which, rushing through the streets, pass each other unnoticed; also he will find the darkest colored ones are Africans, or descendants of Africans, from the hottest climate in the world, where the white race cannot propagate, and the others from climates corresponding to their complexions. The Africans show the effects the torrid climate they occupy has upon them, by their dark skins and frizzled hair which grows from their heated skulls. They, like the inhabitants of all warm climates, naturally feel that languor and lassitude which produces a dread of labor, and like savages, live on the spontaneous productions of the earth, and what chance throws in their way. The inhabitants of the south of Europe, the warmer parts of North and South America, Syria, and many other portions of the globe, from the same cause, lack that energy which is necessary to excel in agriculture, and if we may credit travellers, they are far behind the people in temperate latitudes in all that pertains to neatness, convenience, improvements in agriculture, and gardening, and, rather than strenuously assert their rights, tamely submit to the dictation and oppression of the most odious tyrants. The tendency of warm climates upon the constitution of man, is to lessen the energy of the physical faculties, and produce a sensitive irascibility, especially among the people of the United States, which is not always kept under that prudent control which would give the greater lustre to the character of the gentleman. The true determinate spirit of liberty never can be extinguished in the minds of the people of the temperate climates who have once enjoyed it. History tells us of the struggle between this and the mother country of a like people, which lasted for years, and subjugation was abandoned in despair.

Now let us view the contending nations of Europe, in a war between people of a like climate, of like knowledge, and a like determination of character and purpose, and who can help shuddering at consequences, that has not been familiar with atrocities. The struggle between such people bodes nothing short of a prolonged disastrous war; "where reason to restrain" is out of the question, and the unbridled passions of such people, let loose upon each other, what have we reason to expect but consequences of the most fearful kind? Here are people, equally yoked, contending; not the white man with the crouching black, modified by climate to become the supple slave, but people by reputation highly civilized and advanced in the improvement in every art relating to peace or war, and unless the spirit of the God of peace shall operate upon the minds of the people of those nations, to induce them to stay the improved diabolical missiles of destruction, the present winter, death and carnage will claim their victims in unprecedented slaughter.

The weather of the southern climes operates upon the natives like an anodyne, and by its debilitating effects unnerves them from undertaking mercantile or warlike expeditions in foreign lands, like the roving, restless, go-ahead people of the North, where the climate has fitted them with an instinct for rambling enterprises, and a curiosity to see "all the kingdoms of the world and the glory of them." The climate makes a difference in the people of our own country. We hear of the hardy sons of Maine entering the forests of the South and selecting and felling their better oaks for naval purposes, then transporting them home to be formed into ships, thence sent back again to the original owners of the forests to transport their rice and cotton to market. Why not build their vessels at home, without so much expense? The want of elasticity in the climate produces languor and a want of energy to accomplish such work. The people of southern latitudes can boast of their heroic exploits in war with nations enfeebled by climate like themselves, but how easily, generally, is their renowned valor and fight bragging put to check by a nation from the bracing skies of the North. Thus we see the people of the North more hardy laborers, more powerful warriors, more industrious farmers and mechanics, more enterprising merchants, and certainly, on an equality, if nothing more, as literary characters and statesmen.

Wilmington, Mass., 1855.

SILAS BROWN.

THE OLD OXEN.

A yoke of oxen, nearly 20 years old, were slaughtered by Madison Tuck, of Hallowell, on Wednesday, the 14th inst., (Nov.) an account of which may not be uninteresting, as they have been noticed by the press several times heretofore.

They were raised and kept on the same farm during their lifetime, and were, in course, the property of three successive generations. They were originally owned by Dea. Joseph French, of Chesterville, himself one of the pioneers of that region; were nearly 6 years old at the time of his death, and outlived him fourteen years. From him they descended to his son Isaac French, by whom, in connection with his son E. R. French, they were owned till the time they were driven to the market.

The latter, when a boy of eight years old, used to yoke the then year old calves, hitch them to his hand-aled, and drive about the barn-yard, and up and down the road, and has driven them more or less ever since.

They were calved the 7th and 14th of February, 1836, and consequently were 19 years and 9 months old at the time they were killed. They were what is called high-strung, high-mettled steers, hard to break, but when once broken, tractable and kind to labor, quick in their movements, and ready in an instant when the word was given. They were below the medium size, not girting 7 feet till some 12 or 15 years old, yet strong; the high one in particular never failing, when put to it, to either open his yoke or break his bow if the load did not go; thus breaking 6 yokes and several bows in 3 consecutive years.

The amount of labor they performed was immense. They have been from Chesterville to the Kennebec with masts, spars, or other ship timber, 345 times, averaging 60 miles to a trip, besides

about half as much other teaming in the same line of business to other places, making in all, at least 25,000 miles that they have travelled on the road since they were 5 years old. Their labor on the farm, logging, &c., was equal to more than twice the above amount; so that it may safely be said they have travelled in the yoke miles enough to measure the circumference of the earth at least 3 times.

The nigh one retained his vigor to the last, and, to all appearances, was as active and fit to labor as ten years ago. The off one failed rapidly after he was 18 years old, at which time he was lamed by some means in his hip, and, for a year past, has been unfit to perform any great amount of work. Had he been as active as his mate, they would have been kept some years longer.

In their appearance they resembled, in more respects than one, the old people whom we notice among us; comporting themselves with a kind of dignity and lofty bearing among the other animals of the farm, that betokened their age.

Their average girth at the time they were slaughtered, was 7 feet 2 inches, and their weight in round numbers, was 8 and 10 hundred, respectively; and this, too, they attained the past season without being stall fed.—*Drew's Rural Intelligence*.

For the New England Farmer.

WILLOW CULTURE.

From what we have read in the various agricultural papers, and heard from miscellaneous sources, the idea has become quite prevalent in this vicinity that the willow may be set in any wet place and left to the mercy of the weeds and grass, without care or culture, and still "do well." Undoubtedly it will live and grow upon such fare, but is it not reasonable to suppose that, like all other plants, the better the cultivation, the better the growth and the more the profits—if any? Why not leave potatoes or corn without hoeing, because they will live when so neglected?

In passing many new plantations of willow during the past autumn, I noticed that the weeds and grass had wholly covered the precious thing from the eye, and even on a microscopic inspection, the far-fetched "cutting" can only be found to have sided out a poor feeble twig, nearly six inches long. No wonder the owners wish their money back again, and it will be a wonder if they do not eventually pronounce the thing a perfect *humbug*. They will denounce every thing for the common farmer, but the old line of corn and potatoes, and if agricultural papers and books are not favored with a wholesale curse, they may feel content, for they must walk out of my house, and atone for their want of common sense.

Instead of this, let every man who commences this new business, do it thoroughly, and take the same care, in kind, though less in degree, that he would of a young apple nursery. Let the ground be in order, and kept clean from weeds, at least during the first year. Commencing such an enterprise last spring, the thought occurred to me, why not have something to pay for all this care the first season? Accordingly the rows of willows were set 2½ feet apart, and a row of carrots sowed between each row of willows, and while hoeing the willows, the carrots were also hoed. The work was

but little more than without the carrots, and the extra trouble of thinning out well paid by 100 bushels of good-sized carrots. The rows were about 8 rods in length, and averaged 4 bushels per rod.

In addition to the direct profit from the carrots, I consider the digging necessary to harvesting them, of considerable service to the next year's growth of willows. Where carrots would not do well, turnips might be set in place of them.

Dea. Parker, the owner of the successful willow plantation at Waterbury, Vt., assures me that good care pays as well upon the willow, as upon corn or potatoes. Hoping to hear from others on this subject, I leave the "*twig patch*" for the present.

Randolph, Vt., Dec., 1855.

G. F. N.

STATE BOARD OF AGRICULTURE.

State House, Dec. 5, 1855.

The meeting was called to order in one of the new rooms in the west wing of the building, by His Excellency, the Governor. Present:—Messrs. Tower, French, Sprague, Phillips, Chandler, Lewis, Brooks, Page, Parkhurst, Hubbard, Clapp, Bartlett, Wilder, Nash and Brown.

The first business was reading the proceedings of the last meeting by the Secretary, and then came the reports of the several standing committees, and first in order was that of the committee on Crops, by its Chairman, MARSHALL P. WILDER. The crops experimented upon were peas, potatoes, corn, onions, carrots, beets, parsnips, cabbages, turnips, oats, bromus, millet, rye. On these crops all the fertilisers usually resorted to were employed; common barn manure, superphosphate of lime, muriate of lime, guano, potash, leached ashes, coal ashes, poudrette. The time of application, the amount of each, the kind of soil and state of the weather were all noted by the Superintendent of the farm.

The manures were applied in exact values. If twelve dollars worth of barn-yard manure was applied, so the same value in guano, or any thing else, was applied, and the various fertilizers were given upon different portions of the same field, where there was no particular difference in the quality of the land.

The gentlemen to whom was assigned the duty of experimenting with manures, were Col. WILDER and Prof. NASH; at intervals of some weeks during the growth of the crops, springing from the manures which they applied, they visited them, and after careful observation noted their appearance. When the crops were gathered, they were both measured and weighed, so that the amount of land they were grown upon being known, the exact value of the manures used, and the quantity of crop obtained, it would seem that some facts of great practical value to the farmer should have been obtained. But such does not appear to be the case. For instance: The same land that produced one hundred and twenty bushels of potatoes last year,

upon a certain amount of guano, this year, with the same dressing, fell thirty bushels short! Who can account for this, especially when we take into consideration that the farm was more highly favored with seasonable rains in the summer of 1855, than in the summer of 1854,—it being generally conceded that guano acts more beneficially in wet than in dry summers?

The results, in all these carefully conducted experiments with manures, we regret to say, have been not only unsatisfactory, but contradictory, ending, thus far, in confusion and uncertainty, rather than leading to any well settled principles. The reports of these gentlemen are not yet completed, so that we can not state their precise terms, or draw inferences from them that would be of any value. When they are published, if not earlier, we hope to give the inquiring reader a better view of them.

The gentlemen who had the charge of experiments with *Stock*, were Messrs. BROOKS, of Princeton, and NEWELL, of West Newbury. In prosecuting their trial of cows through a period of six months, the animals were weighed, morning and evening, at the expiration of each twenty days; their food was also weighed, the kind noted, and the average quantity given which was consumed, daily, during the twenty days. A table, similar to the one below was made out for each of the periods contained in the twenty days. This is given to show the results obtained, as well as the systematic mode of proceeding by the committee.

Statement of milk and food, &c., of cows, from Feb. 1 to Feb. 20, both inclusive, 20 days, 1855.

cents, or eight cents and twenty-one hundredths (8.21) the gallon of ten pounds.

Average number of cows milked daily.....15.41
Average flow of milk daily.....235.85 pounds.
Average number of pounds of milk given by each cow daily throughout the two hundred and sixty days.....15.24 pounds.
Average number of days of giving milk after calving.....168½

Reports were also made from the committees to whom were assigned the subjects of *Permanent Improvements, Labor*, and from the delegates sent to the several county societies. All these reports were subjected to a pretty thorough discussion, which in some cases demanded an analysis, or synopsis, of them, and several were recommitted for emendation, enlargement, or explanation.

In the afternoon of the second day, a most interesting discussion arose upon the propriety of the introduction of the trotting course into the show grounds, and its influence upon the general prosperity of the society, and on the morals of the people. The arguments presented were varied, ingenious and earnest, but pressed with that courtesy and dignity which has ever characterized the proceedings of the Board.

The following are the principal crops raised the past summer:

Peas.....15½ bushels.
Potatoes.....1647 bushels on 12 acres.
Corn.....982 bushels on 21 acres.
Oats.....236 bushels on 10 acres.
Beans.....604 bushels on 2 acres.
Carrots, 63 tons.....2480 bushels on 5 acres.
Rye.....160 bushels on 10 acres.
Turnips.....1000 bushels on 2½ acres.
Hay.....56 tons.
Onions.....461 bushels on 1½ acres.
Parsnips, Beets, &c.....260
Cabbages.....4000 heads.
Corn fodder.....30 tons.

The following propositions were submitted by Mr. FRENCH, from the Norfolk Society, and severally adopted:

Voted, That the Secretary be requested to invite such farmers in this Commonwealth as he may deem proper, to furnish to this Board the manner of their feed of cows, their weight, expense, and yield of milk for a given time; also the feed of oxen, their weight, expense and work at the time; also the feed of horses, the expense, their weight and work at the time, and also the breed of each.

Voted, That Messrs. FRENCH, SPRAGUE, and BROOKS, be a committee to consider and report to this Board what disposition of the rooms, now granted for their use, should be made, with a view to best serve the cause of Agriculture.

Voted, That Messrs. FRENCH, BROOKS, LEWIS, BROWN and SPRAGUE be a committee to consider, and report to this Board what measures, if any, are best adapted to serve the cause of Agriculture in this Commonwealth.

NAMES.	Age of Cows.	Average weight, morning and evening, Feb. 19, 1855.	Average weight, morning and evening, Feb. 20, 1855.	Kinds of Food and average quantity consumed daily in 20 days.					Daily flow of Milk. Average for 20 days.	Per cent. of Milk on Cows. Weight of Cows.	Days after Calving.
				Hay. Lb. 100.	Straw. Lb. 100.	Corn Fodder. Lb. 100.	Carrots.	Cob Meal.			
Chamberlin,	8	1017	1018	8.50	5.75	4.37	20.00	5.00	16.19	1.59	153
Della,	8	1002	976	8.50	5.72	4.37	20.00	5.00	19.19	1.94	72
Gentle,	10	965	940	8.50	5.75	4.37	20.00	5.00	17.69	1.85	123
Fanny,	11	965	962	8.50	5.75	4.37	20.00	5.00	18.06	1.90	70
Flora,	6	968	922	8.50	5.75	4.37	20.00	5.00	28.56	3.02	59
Rosea,	10	975	930	8.50	5.75	4.37	20.00	5.00	27.31	2.88	63
Haywood,	10	944	926	8.50	5.75	4.37	20.00	5.00	19.31	2.08	69
Spot,	7	854	820	8.50	5.75	4.37	20.00	5.00	15.44	1.91	123
Kedneck,	6	882	798	8.50	5.75	4.37	20.00	5.00	21.44	2.65	61
Kendall,	9	1117	1122	11.80	5.00	4.00			dry.		
Dolly,	11	1207	1201	11.80	5.00	4.00					
Star,	11	1125	1162	11.80	5.00	4.00					
Bounty,	6	925	928	8.50	5.75	4.00	20.00	11.00	11.00	1.18	112
Whiteface,	6	783	710	8.50	8.75	4.00	20.00	21.37	21.37	2.96	64
Redheifer,	6	971	964	11.80	5.00	4.00			dry.		
Gentle, 2d,	6	946	963	11.80	5.00	4.00					
Cherry,	6	955	961	11.80	5.00	4.00					
Sawyer,	6	1047	1050	11.80	5.00	4.00					
Lady Devon,	5	950	937	8.50	5.94	4.00	20.00	5.00	10.94	1.13	170
Jenny Lind,	2	702	653	8.50	5.75	4.37	20.00	5.00	15.75	2.32	50

The milk given by these cows in the thirteen trials of two hundred and sixty days, was sixty-one thousand two hundred and sixty-nine pounds, which cost five hundred and three dollars and nineteen

WHY THE CAT DON'T SWEAT.

"Pa, does the cat ever sweat?"

"No, my son."

"Why, pa?"

True enough, thought I, why? The carnivorous animals have no perspiratory pores, as it is said; but this only helps over the first why, and we are stopped again by the next one. If it had been necessary for them to sweat, God would have given them an apparatus, as he has given to horses and cows in their skins.

"I think," said I, "it is because they eat so much lean meat."

Strange as it may seem, all animals that perspire get into a sweat to keep cool. When an ounce of water is converted into vapor, whether it has been sprinkled on the floor on a summer's day, or put on the fire in a green forestick, or spread on the surface of the earth in a dew, or exists in the form of perspirations on our bodies, or exhales invisible from our skin, or comes out of our lungs in breath, that ounce of water appropriates to itself, and destroys for all other purposes, a certain amount of heat. If animals sweat to get rid of excess of warmth, is there any connection between this process and the character of their food?

If we designate the surplus carbonaceous matter in the food, heat, and the nitrogenized matter, motion, we should have in beef, 1 lb. motion to 3 lbs. heat; in oats, 1 lb. motion to 15 lbs. heat; in hay, 1 lb. motion to 18 lbs. heat.

Now, observation shows that animals cannot use of the one of these elements, without disposing, in some way, of a corresponding amount of the other. Stage horses hard driven, if the weather be warm, grow poor—in common terms, they sweat off their fat. It is equally true, too, that animals in low flesh are weak.

As the food of herbivorous animals contains five or six times the amount of heat-producing materials—starch, gum and sugar—that exists in animal flesh, so that class are more sluggish in their habits than carnivorous animals. Lions and tigers, though they have been consigned to a warm latitude, and covered in furs by a kind Providence, must roam to keep warm. It is for these natural reasons that they cannot brook the condition of captivity. Poetry has nothing to do with their restless habits when in cages; they are chilly from the inaction of the domestic condition.

Dogs and cats are very sensitive to cold. How Carlo shivers when he comes out of his house on a cold morning; and whines at the door; and puss, notwithstanding her full dress, never lies down to nap in a cold place. Neither of them can keep still in the cold. If they were to be stabled like cattle, and could be kept as still, it would kill them in a few days.

Although the horse, when fed on hay, has but one pound of motion to dispense of for every eighteen pounds of heat, he must work that off in order to enjoy warmth. After drinking on a winter morning, when he finds himself shivering, he prances and kicks for the fun of the thing, and by disposing of a little motion, is enabled, so to speak, to use eighteen times its weight of heat. How he smother the blasts out of his furnaces!

When we notice the slight difference that is shown in this table between the analysis of hay and oats, and when we reflect on the difference in the

performance of a hay-fed horse and one fed on grain, and when we compare these two items with the composition of flesh, we are led to conclude that horses could never be brought to feed on beef—and that we must put the flesh-eating horses of mythology in the same stall with centaurs.

But, on the other hand, if a horse is fed high, and is confined in cold weather, and the carbon of his food is used to keep him warm, the nitrogen will accumulate somewhere. He will get the gout from high living. Let him have exercise every day, if it is only by running in the yard.

The horse sweats because there is so much starch, gum and sugar in his food; while the cat does not because there is so little in hers. The starch, gum and sugar in the grass go to make fat with grass-eating animals; the cat gets but little fat in her food, and so God gave her furs, and lets her wear them all summer to keep her warm.—*Country Gentleman*.

MILK, BREAD AND BUTTER TREES.

We had heard several weeks before of a tree, the sap of which is a nourishing milk. It is called "the cow tree," and we were assured that the negroes of the farm, who drink plentifully of this vegetable milk, consider it a wholesome aliment. All the milky juices of plants being acrid, bitter, and more or less poisonous, this account appeared to us very extraordinary; but we found by experience, during our stay at Barbula, that the virtues of this tree had not been exaggerated. This fine tree rises like the broad-leaved star-apple. Its oblong and pointed leaves, rough and alternate, are marked by lateral ribs, prominent at the lower surface and parallel. Some of them are ten inches long. We did not see the flower; the fruit is somewhat fleshy, and contains one and sometimes two nuts. When incisions are made in the trunk of this tree, it yields abundance of glutinous milk, tolerably thick, devoid of all acidity, and of an agreeable and balmy smell. It was offered to us in the shell of a calabash. We drank considerable quantities of it in the evening before we went to bed, and very early in the morning, without feeling the least injurious effect. The viscosity of this milk alone renders it a little disagreeable. The negroes and the free people who work on the plantations drink it, dipping into it their bread of maize or of cassava. The overseer of the farm told us that the negroes grow sensibly fatter during the season when the palo de vaca furnishes them with most milk. This juice, exposed to the air, presents at its surface (perhaps in consequence of the absorption of the atmospheric oxygen) membranes of a strongly animalized substance, yellow, somewhat resembling cheese. These membranes, separated from the rest of the more aqueous liquid, are elastic, almost like caoutchouc; but they undergo the same phenomena of putrefaction as gelatine. The people call the coagulum, that separates by the contact of the air, cheese. The coagulum grows sour in the space of five or six days. Amidst the great number of curious phenomena which I have observed in the course of my travels, I confess there are few that have made so powerful an impression on me as the aspect of the cow tree. Whatever relates to milk or to corn, inspires an interest which is not merely that of the physical knowledge of things, but is connected with another order of ideas and sentiments. We can

scarcely conceive how the human race could exist without farinaceous substances, and without that nourishing juice which the breast of the mother contains, and which is appropriated to the long feebleness of the infant. The amylaceous matter of corn, the object of religious veneration among so many nations, ancient and modern, is diffused in the seeds, and deposited in the roots of vegetables; milk which serves as an aliment, appears to us exclusively the produce of animal organization. Such are the impressions we have received in our earliest infancy; such is also the source of that astonishment created by the aspect of the tree just described. It is not here the solemn shades of forests, the majestic course of rivers, the mountains wrapped in eternal snow, that excite our emotion. A few drops of vegetable juice recall to our minds all the powerfulness of the fecundity of nature. On the barren flank of a rock grows a tree with coriaceous and dry leaves. Its large woody roots can scarcely penetrate into the stone. For several months of the year not a single shower moistens its foliage. Its branches appear dead and dried; but when the trunk is pierced, there flows from it a sweet and nourishing milk. It is at the rising of the sun that this vegetable fountain is most abundant; the negroes and natives are then seen hastening from all quarters, furnished with large bowls to receive the milk, which grows yellow, and thickens at its surface. Some empty their bowls under the tree itself, others carry the juice home to their children.—*Humboldt's Travels in the Equinoctial Regions of America.*

THE SCALE INSECT OF THE APPLE.

Nearly every person who grows an apple tree, has observed that the branches of the older, and stems of the younger trees, are frequently covered with a minute scale, showing in general no appearance of life, and resembling nothing so much as a miniature oyster shell. This little scale is, however, an insect, and one of the many enemies of the apple, belonging to a family that contains more anomalous forms than any other. It is the *Homoptera* of Macley. All this family are supplied with a suctorial mouth, arising so far back on the under side of the head as apparently to come from the breast in some species. The present insect is included in the genus *Coccus*, and has for its near relations, some that have been useful to man from the time of the ancients, producing valuable dyes, the cochineal being one of them; and it is calculated that in one pound of this dye there are 70,000 of these little insects. It feeds upon the cactus.

Our apple scale has, however, no qualities to render it useful; and a short account of its life and habits will be all that is necessary. When first hatched from the egg it possesses considerable ambulatory powers, and can crawl all over a tree and select a situation. It then inserts its *rostrum* into the tender bark and draws the sap, and such a constant drain, by the countless numbers found upon a tree, must be very injurious. The insect remains in this position until death in the female, undergoing its transformations, which, instead of producing a higher state of development, as in most other forms, has a contrary effect, it becoming, in fact, a mere inert, fleshy mass, in some allied species losing even the rudiments of limbs and all appearance of articulation. The male, on the contrary, how-

ever, who is much smaller, in casting off his pupa skin, obtains pretty large wings, and well developed limbs, armed with a single claw, and his mouth becomes obsolete; he then sallies forth in search of his partner, of which he sees nothing but the pupa envelope. The female afterwards becomes distended with eggs. She then gradually dries up, leaving the shell of her body for a covering to the newly hatched young, of which there are two broods in a year.

PREVENTIVE.—Harris, in his "Treatise on Insects injurious to Vegetation," recommends the following as a preventive: To two parts of soft soap, add eight of water, and mix as much lime with it as will make a stiff white-wash, and apply with a brush to the trunk and branches of the infected trees in the month of June, when the young insects are newly hatched. K.

REMARKS.—This is a capital description of the apple scale, by one of the most promising entomologists in Ohio.—*Ohio Farmer.*

For the New England Farmer.

APPLES.

SEVERAL KINDS IN ONE TREE.

In grafting large trees, several varieties of scions are frequently employed in forming one new top; there are several objections to this practice.

Every one at all familiar with fruit trees, must have observed that each variety has a mode of growth peculiar to itself, and those who have had much experience can often ascertain the kind, when not in fruit, by this circumstance alone. Some varieties are vigorous and of rapid growth, others are slow and unthrifty, and others of short duration and subject to decay early. A tree combining these discordant elements can possess little of symmetry or beauty, and the most judicious pruning cannot remedy the evil. For instance, a tree may be grafted with the Northern Spy, which is of remarkable upright growth; the Roxbury Russet, which is horizontal, or spreading, and the Spitzenburg, whose branches are drooping, or pendant. In a few years the scions clash and entangle, and it will be impossible to give them the proper form or direction, and when the tree comes into bearing the defect will be still more apparent. There is another objection to having more than one variety in a tree; it creates confusion in gathering the fruit, and where the kinds somewhat resemble each other, they are liable to get mixed, causing dissatisfaction among the purchasers. Where a person has but little land, and a few large trees which he is desirous to graft to other varieties for his own use, and who is willing to dispense with a good formed top, it may be justifiable to put several kinds into the same tree, but in extensive orchards it should be avoided.

Leominster, Dec., 1855.

O. V. HILLS.

REMARKS.—We call especial attention to this article. By observing its suggestions, a great many errors in the name of fruits, as well as a great vexation in the cultivation of them, may be avoided.

LUXURY OF THE ANCIENTS IN ROSES.—To enjoy the scent of roses at meals, an abundance of rose-leaves was shaken upon the table so that the dishes were completely surrounded. By an artificial con-

trivance, roses, during meals, descended on the guests from above. Helioabalus, in his folly, caused violets and roses to be showered down upon his guests in such quantities, that a number of them being unable to extricate themselves, were suffocated in flowers. During meal times, they reclined upon cushions stuffed with rose leaves, or made a couch of the leaves themselves. The floor, too, was strewn with roses, and in this custom great luxury was displayed. Cleopatra, at an enormous expense, procured roses for a feast which she gave to Anthony, had them laid two cubits thick on the floor of the banquet room, and then caused nets to be spread over the flowers, in order to render the footing elastic. Helioabalus caused not only the banquet rooms, but also the colonades that led to them, to be covered with roses, interspersed with lilies, violets, hyacinths, and narcissi, and walked about on this flowery platform.

For the New England Farmer.

THE LATE FREDERIC HOWES, ESQ., OF SALEM.

BEFORE THE BOARD OF TRUSTEES, DEC., 1855.

MR. PRESIDENT:—Since the last meeting of this Board, one of the oldest and most distinguished of our number,—one who was prominent at the start, and has enjoyed the highest honors of the association,—has “passed that bourne, whence no traveller returns.” It is fit, in conformity with established usage—it is fit, in consideration of the merits of the deceased, that a respectful and truthful notice should be inscribed to his memory.

FREDERIC HOWES was born in the town of Dennis, County of Barnstable, 1782; and died at Salem County of Essex, 1855; aged 73 years. When young, he removed with his father to Ashfield, County of Worcester, where he learnt his first lessons in farming, and imbibed that taste for the culture of the soil, which was uppermost in his thoughts through life. Mr. Howes possessed a sound, discriminating mind,—an ardent desire for knowledge; and a perseverance of effort, that would not allow any subject, to which his attention was directed, to pass imperfectly understood. He examined closely, and was not satisfied with superficial observation. His opinions, therefore, when formed, were entitled to respect. He pursued his studies at Harvard University; but unfortunately, (in the year 1807, when many of the young men there thought they knew better than their masters,) he did not receive a degree on leaving the institution. Not that a degree, in itself, is of any value, but because the deprivation of it is oftentimes a source of uneasiness and mortification;—and so in after life he often felt it to be; notwithstanding he ever felt, that the authorities of the College made a mistake, in pursuing the course they then did.

Mr. Howes was educated to the profession of the law, in the County of Middlesex; and entered upon the practice, at Salem, in the County of Essex; at the same time having his home in the adjoining town of Danvers. Such was his reputation among those who knew him best, that he was repeatedly chosen, to represent them in the General Court. By nature diffident and unassuming, he was not the man to crowd himself where he was not fitted to be. He was one of the earliest founders and officers of this Society; and at all times, its constant

and devoted friend. He labored without ceasing through good and evil report, never faltering or hesitating where any service was to be performed.

It is no small honor, for Mr. Howes, to have been designated by the discriminating mind of TIMOTHY PICKERING as most worthy to succeed him in the Presidential Chair. The manner in which he discharged the duties of this station, for several years, until he voluntarily withdrew, is well remembered by some still here, with locks bleached with much service. To say that he *filled the place* that had been occupied by his distinguished predecessor, for *ten years previous*, is what no son of Essex will ever presume to say. *Primus inter pares*,* will ever stand the name of PICKERING, the friend and confidant of WASHINGTON. But, to say that he discharged all the duties that devolved upon him, with fidelity and care, is certainly true. The lessons of instruction communicated by him, will be found on the pages of our journals; and will continue to be referred to with increasing respect.

Mr. President, I have said enough, perhaps more than enough, to impress upon the minds of all, the propriety of the act in which we are now engaged. *Thirty-seven years*, and more, have passed away since the organization of this Society. A few of the founders only remain to tell the story. A few years more, very few indeed, and all will be gone; and “the places that knew them will know them no more forever.” When thus admonished, it becomes us to pause for a moment, to consider “what shadows we are, and what shadows we pursue.” On the same day, and about the same hour, that I heard of the death of my venerated teacher and friend, I was called to part with one, to me most dear, in my own household. All nature proclaims aloud that we must die. No one can more fully appreciate this truth, than the intelligent, reflecting farmer. A man may pass through life in splendor and affluence; but when death comes, there is no distinction between the laborer and the lord of the manor. Here all are on the same level, however they may have been born. Here it is that fame and renown cannot assist; that even the devotion and sympathy of friends cannot save. Here it is that the relations of the creature to the Creator, are irresistibly forced upon our consideration. Happy are those who meet the closing scene of life with that calm and confiding trust in the mercy of God, which characterized the last hours of our departed friend.

In view of these considerations, I respectfully ask of the Board, to lay aside the cares of the world for a moment; and to adopt the following Resolutions.

1. *Resolved*, That the members of this Board have heard with deep emotion of the death of Frederic Howes, Esq., the oldest surviving honorary member of the Board.

2. *Resolved*, That the amiable virtues, devotion to duty, and sound learning, that so eminently characterized the deceased, present a model to all worthy of imitation.

3. *Resolved*, That the Secretary be instructed to communicate to the widow and family of the deceased, a copy of this expression of the feelings of the Trustees, and that the same be published in the Transactions for the year.

* The first among his equals.

HOMES FOR THE PEOPLE.

As proposed some time since, we now give one of several plans of houses, which we think will afford many valuable suggestions to those who are about to build. And those contemplating building should study. No one is safe in erecting expensive buildings, unless he has given considerable thought and examination to the subject. He should refer to books, converse with those who have experience, and make personal inspection of buildings that come somewhat near that which he proposes to erect. In this way, he will be able to prevent annoying and expensive alterations, and find his house constructed upon correct principles, and affording the conveniences at once that he desires.

So far as expense is concerned, it is as unwise to erect a house without careful study and deliberation, as to construct a ship upon the first model that chances to lie in the way. Want of original design will give a dwelling, without architectural taste or skill, with awkward and contradictory roofs and gables,—with smoking chimneys, and blind passages leading the unwary headlong down the cellar stairs,—with doors opening against each other and battering themselves like a pair of young rams, with basements mouldy and dank, and the general appearance of the whole establishment indicating that it was *thrown together*, rather than constructed upon any well settled principles.

Such a dwelling would stand as a perpetual reproach to its proprietor, a never-ceasing annoyance to the family doomed to occupy it,—and the nursery of ill-humor and discontent.

The plan presented below is from "*Homes for the People*," by GERVASE WHEELER, Esq., Architect, N. Y., and published by Charles Scribner, of that city.

This plan represents a building somewhat irregular in form, yet compelling to no waste of space in its internal arrangements. The principal entrance is made by means of an open porch marked upon the plan, No. 1, which protects the hall door opening into an entry, No. 2, between which and the inner hall, No. 3, is a screen filled with glass and double doors. This hall is nine feet wide. On one side is a large drawing-room, No. 4, which is about thirty feet long and sixteen wide, with projecting bay-windows in the front and upon one side.

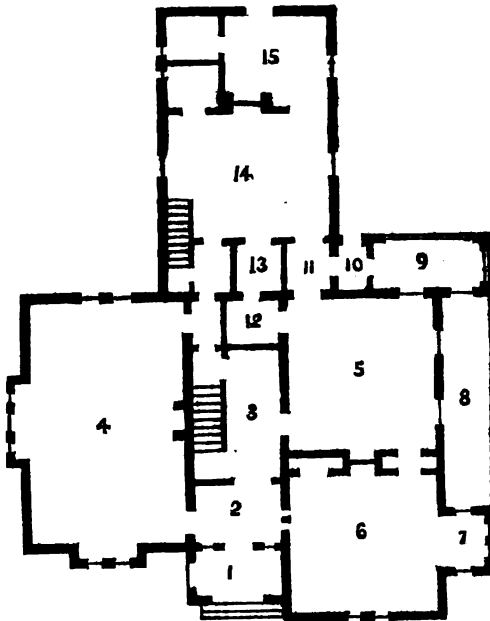
Upon the other side of the hall are a dining-room, No. 5, and family parlor or library, No. 6. This latter room has a peculiar feature in the deeply imbayed window, or rather wing, No. 7, which is sufficiently large to make a pleasant little retreat for quiet reading or writing. Its window on one side opens upon a covered terrace, No. 8, the end of which is terminated by a small conservatory,

No. 9, a view into which can be obtained from the projecting bay in the parlor.

Connected with the conservatory is an entry, No. 10, which communicates with the domestic offices, and is also a means of exit to the garden.

No. 11 is a passage connecting dining-room and kitchen, provided with shelves, and other conveniences that permit it to be used as a serving-room during meal times.

No. 12 is the store and china closet, connected with the dining-room, and 13 is one of similar intention, connecting with the kitchen, having a sliding door between them for passing the contents one from the other. All these useful features for domestic conveniences are of ample size.



PLAN OF PRINCIPAL FLOOR.

No. 14 is the kitchen, conveniently near the main body of the house, and yet so shut off, by means of double entries and other separation, as to be no annoyance. This room is sixteen by fourteen. From it leads the servant's stairway, to the floor above, under which is also a flight leading to the cellar below.

No. 15 is the laundry and scullery; connected therewith is a store closet, and next to it (opening into the kitchen) one for use of the cook. In the laundry is an outside door leading to the yard and stables, which may be planned, and as much room given, as the wants of the family require.

Underneath the whole of this floor is a cellar seven feet high in the clear, containing vegetable, milk and store-rooms, as also receptacles for coals, and space for the furnace.

The distribution of the space upon the chamber

floor is thus made. No. 1 is the upper hall, lighted by a dome-overhead, which is inserted in the attic floor, and illuminated by glass level with the roof, in such a manner as not to be observed from outside the building.

On one side are large chambers, 2 and 3, over the drawing-room; No. 2 being designed for family use, and having connected with it a large closet.

In front is a smaller room, No. 4, over the entrance porch. No. 5 is over the family sitting-room, and No. 6 is above the dining-room. Each of these rooms has abundant closet provision, as the plan will show.

In the wing of the building, a stairway, No. 7, leads to an attic overhead, the partition inclosing which projects into the chamber, No. 6, and to conform to which, on the other side of its window, a closet of similar size is framed, by which means the symmetry of the chamber is preserved.

No. 8 is a chamber of liberal size, connected with which is a large closet, beside the stairway to the attic.

No. 9 is a corridor, leading from the head of the private stairway to a bathing-room, No. 10, and a servant's sleeping-room, No. 11.



FRONT ELEVATION.

upon the chamber floor, are nine feet high in the clear.

The elevation of the principal front consists of a gabled projecting portion, forming the main mass of the building, and which is higher than the rest of the edifice. This contains the family-room, dining-room, &c., and has an attic above its chamber floor, lighted in front by a circular-headed window, in the gable-end, and by a similar window in the rear. Cost about \$4000.

For the New England Farmer.

OPEN QUESTIONS AMONG FARMERS.

Probably, in no human pursuit, are there so many unsettled and contradictory usages, as among the agriculturists. Other professions have their thoroughly-settled principles, and these are regarded as axiomatic truths—as the basis of further advancement, and of definite, practical results. Richard Cecil tells us, that when he had once thoroughly examined any question in theology or morals, and had made up his mature opinion upon it, he put that question on the shelf, as one never to be opened again. And the lawyers have their “*res adjudicata*,” or principles which have been adjudicated and forever settled. But how few are the modes of farming among us which have been “placed upon the shelf”—How few of our farmers have their “*res adjudicata*”—their well-settled, uniform practices.

Let us see how this matter stands. It is yet an open question among farmers, whether the *Ayrshire*, or the *Devons*, or the *Durhams*, or the *Herefords*, or even the *navies*, are the best cows for milking purposes.

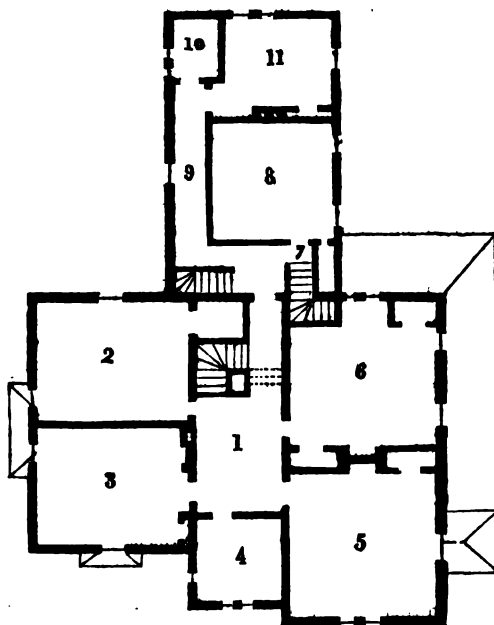
It is an open question among them, whether the *Suffolks*, or the *Essex*, or a mixture of breeds, make the most profitable swine.

It is an open question what kind of potatoes it is best to cultivate, and whether the seed should be large or small, and whether it should be cut or uncut.

It is an open question, whether corn should be topped, or cut up by the roots.

It is an open question, whether common plowing, or deep plowing, is, on the whole, the best.

It is an open question, whether sward land, in-



CHAMBER FLOOR.

In this portion of the building the walls are eight feet high to the top of the plate, the ceilings following up the rake of the rafters so far as to permit a straight ceiling of about ten feet, or even more, in the highest part of the room.

The rooms, in the main part of this building

tended for corn the next year, should be plowed in the fall or not, or whether it should be plowed twice in the spring.

It is an open question, whether corn stalks should be taken into the barn before the juices are entirely evaporated, or whether they should remain in the field, exposed to all the rains of autumn, till they are "done up brown."

It is an open question whether potatoes liable to disease should be dug early or late in the fall.

It is an open question, whether manure should be kept under cover, that its ammonia may be retained, or thrown out to the action of the sun and rain, that those powerful disinfectants may deprive it of its offensive odors.

It is an open question, whether it is best to have a drain running from the barn-yard into the road.

It is an open question, whether green or dry wood makes the best fire; but when the mercury is ten degrees below zero in the morning, there is little doubt in the mind of the "hired girl" who is compelled to make it, which she had rather have provided.

It is an open question, whether it will pay to dig and cart meadow mud, and compost it with stable manure for the crops next spring.

It is an open question, whether guano or artificial manures, at their present high prices, can be profitably used in New England.

And, finally, it is an open question with many of the tillers of the soil, whether they ought to take the *New England Farmer*, and with some who now take it, whether they ought to pay for it.

Here, Messrs. Editors, endeth the present communication, for I have not the time, nor you the space, this week, to consider what can be done to settle these and many other questions, which are yet open among the farmers of our country.

Walham, Dec., 1855.

D. C.

For the New England Farmer.

FARM WORK FOR WINTER.

MR. EDITOR:—In the *New York Tribune* of the 24th ult., there is an article on this subject, and as it is addressed to the farmers of the country, I propose to examine the ideas advanced. In the first place, they assert that farmers in the country are in the habit of hiring help of both sexes, in large numbers, from the city through the busy season, paying them only such wages as will sustain them for the time, and then turning them adrift on the approach of winter, and they make their way back again to the city to starve or live on "soup" at public expense and charity till spring.

Now that there are many laborers that go into the country from the city in the spring season, is probably true; and that many of these laborers seek work among the farmers is also true; but that the great majority of such help is just the poorest help the farmer can have is more true still. But owing to the extreme scarcity of Yankee help, the farmer is obliged to hire this foreign help, which, in some cases is good; in the majority of cases it is unskilled and awkward in the extreme. But that such help invariably make their way back to the city again at the close of the busy season, to winter, I want more proof of. So far as my knowledge goes, when these laborers are discharged from the farm, they generally seek employment in the manufacturing villages and towns, to work as waiters

and tenders in the shops, coal bearers, wood sawyers, livery stables, &c. I much doubt whether one in twenty of such laborers who leave the city in the spring, to seek work and get a hundred miles inland, go back to the city again to winter, unless they have parents or relatives to receive them. The truth is, these hordes of lazy beggars that infest the city at all seasons of the year, never go into the country at all to any extent, unless they are carried there by main force. This fact is plain to us, when it is known that such people very seldom beg when in the country at any season of the year, but they look around for something to do to earn enough at least, to keep soul and body together, till the warm season opens again. The great object of this class is, to live to-day and let to-morrow take care of itself.

But the *Tribune* says, "if a farmer cannot afford to pay wages in the winter, he can afford to feed his summer laborers, and he should do so instead of discharging them, and sending them back upon the city. It is a mistaken notion that a farmer cannot find employment for laborers in winter. In this latitude, one-half the days of the winter months are good working days, and with very slight exceptions, there should be no lost time." Now, what are the facts in regard to farm labor during winter? Many farmers know well that in a latitude between 40° and 50° North, that very little or no practical farm labor can be done between the first of December and the first of April. There will be years when mild weather will hold out till the 15th or the 20th of December, but they are only exceptions, and not rules. In 1835-6, or twenty years ago, this season, winter set in the 20th of November with a snow and ice storm, and that snow did not go off till the next April. There was in this section of country over a hundred days' sleighing that winter, and more still at the North. I had a field of turnips caught under the snow in November that season, and I lost them; other farmers were caught with crops out. In 1839, I worked at farm fences from Thanksgiving till about the 15th of December. The weather was as mild as it has been the past season from the 1st to the 20th of November. On or about the 15th of December that year, a north-east snow storm set in on Saturday evening, which continued till late Monday afternoon following. There was no frost in the ground and the snow lay from two and a half to three feet deep on a level. My sheep I found, after the storm, on a neighboring farm, some under the fence, some under bushes, and others under the snow-banks, and my woodpile was standing up in the woods, not a very comfortable satisfaction to think of either. Had I spent the first two weeks in December in hauling a wood-pile together instead of fence-making, it would have been time and labor better laid out. That snow did not show bare ground again till the last of February.

I name these two cases to show what our winters often are, and that generally speaking, winter farming in this climate is just no labor at all on the farm. November is a good month to finish off farm work. Crops—with the exception of turnips—should be secured in October, and as early in November as convenient. During November, trees may be transplanted and late fall plowing may be done. Stones may be dug up in the fields, and large rocks blasted out with powder. If a light snow should fall, large stone and rocks may be removed on a stone sled or drag, to a good advantage, to the

fence line. But then no dependence can be placed on this labor in such constantly varying weather. After winter sets in with frost, no wall-laying or fence-building can be done to any advantage, as it requires the ground clear of frost for such business.

The writer in the *Tribune* says again—"Most of the fence building should be done in the winter, yet it is a kind of work that is much neglected, because unnecessary to restrain cattle. We contend that no barn should ever be built without a cellar, yet ninety-nine of every hundred are so built. To remedy this, go to work in winter and dig and wall your barn-cellars. As soon as this is done, go to the nearest muck bed and dig a cellar in that, and haul a portion of it to your new barn-cellar to compost with your manure heap. Hauling manure is another part of winter work, but mind and not drop it in little heaps to bleach and soak through snow and rain. Pile it up as much as possible to shed rain, in some convenient spot to haul upon the field where you want it."

Generally speaking, barn-cellars should be made under barns, though there will be exceptions to this rule. A gentle elevation or knoll of gravel, where it can be had, should be dug out for a barn-cellar. This will make the cellar dry and airy, leaving the mouth of the cellar to face the south, the bottom of the cellar to set on or near the level with the surface below. If the situation of the land for the building is on or near a level, and the soil inclined to wet and dampness, then the barn-cellar should be pretty much above ground. But then, instead of digging and stoning barn-cellars and building barns in the winter season, the time to do this is in early summer, after the spring hurry of work is over, having the buildings ready for the hay and harvest crops. The timber should be prepared and hauled the previous winter, and other materials should be got together as much as can be. Digging out muck in the winter season, is a work at which little can be done, but it may and should be attended to in the fall, previous to winter setting in. Where draining is done in the dry season, the refuse muck should be carted into the barn-yard and piled away in the cellar for winter use to mix with manures. As to hauling manure in the winter season out of the barn-yard on to the fields, it is a poor business, being well followed by few farmers. The composting of manures in the field during the winter season, will not amount to anything, all the materials, both muck and manure, being in a frozen or half-frozen state; ditto, the farm laborers.

The better way is to keep all the manure in the yard, hog-pens and barn-cellars till spring, taking care that the manure does not heat and fire-fangle by using plenty of muck with it in the course of the winter. Manure may be carted out and composted on the field where it is wanted late in the fall, before cold weather sets in, as it may be spread and turned in with the plow to lie till spring. As to digging wells in the winter, I dug one some years ago in December, and when finished there was some five feet of water in it. The next spring, in May, the water all run out at the bottom, and there has never been any water to stand any length of time in that well. I made up my mind before I dug the next well it would be in August or September, when the springs are at the lowest point.

For barn-yards, running water is the best, if it can be had naturally, or it may be raised by a water-ram or wind-mills. Where running water

cannot be had, a cistern should be dug in the yard; one that will hold one hundred barrels or more should be provided, and then all the water falling on the farm-buildings should be conducted into the cistern. Cisterns are much preferable in some yards to wells or pumps of any description; and the cisterns should be built large enough to hold out through a month or a week's drought, with an occasional shower to replenish it. A good cistern is also indispensable for the kitchen, unless you can have soft running water.

It will be seen, then, to sum up, that the amount of farm labor proper, that can be done in the winter, is very small in this cold climate. Where the weather is mild and the ground bare, something may be done at cutting bushes and trimming up woodlands. But of course, no dependence can be placed on the weather; you may have one or two days in a month for this business, and you may have none at all. If you have a swamp of wood and brush that you wish to cut over, it may be done after the swamp is well shut up with frost. Wood for the winter and coming summer may and should be cut and carted or sledged home when there is snow. Also, rail and fence timber may be cut and delivered on the lines of fences where it is wanted for spring work. Saw logs and heavy timber may be cut and delivered to the mill when there is a good body of snow on the ground. Also, where farmers cut and deliver wood for market, a load of wood may be carried to the town or village, and a load of manure brought back, which can be put in the hog-pen, barn-yard or barn-cellar, as may be.

Very few farmers will have work for the same number of hands in winter that they can employ in summer, in this climate, yet one or two hands may often be employed to good advantage. Between latitude 40° and south of that, or the southern parts of Pennsylvania and New Jersey, with Delaware and Maryland, this same work through winter may be carried out in part, while down in Southern Virginia, and south of that, it may be carried out in full, making leeway for stormy weather. Next, all farmers may have an ice-house, and all that can, without carting it at too great a distance, should build a house in late fall or early winter, and then three or four days in a week may be spent when the ice is of right thickness, in cutting, carting and filling it. A farmer may, on the principles of charity, keep his farm laborers over through the winter; but very few or none of the farm laborers that are worth anything would stay and work for board without wages, while those who would stay for board would only do so for the time being. And, finally, it is much easier to give advice to farmers on such matters as farming in winter, than it is to have that advice worth much to practical men. For of what avail is such advice, unless it can be made practical to farmers themselves?

Derby, Ct., Dec., 1855.

L. DURAND.

TRIMMING FRUIT TREES, GRAPE VINES, ETC.—

Those who neglected to trim their grape vines in November, may do so this month. It is a much better practice than to trim them in the spring. Many fear to do so, because, when so trimmed, they occasionally find dead wood in the spring, and imagine that it is consequent upon the exposure of the ends of the branches where trimmed. This, however, is not the fact. Inexperienced hands

sometimes trim unripe wood, instead of removing it, and this, of course, dies down during the winter, which it would do whether trimmed or not. Trimming at this time prevents bleeding in the spring, and it also saves that portion of pabulum which would arise in the spring from the roots, into the removed parts, thus giving greater vigor to fall-pruned vines. We have tried this experiment fully, and are satisfied that grapes grown on vines pruned in the fall, ripen earlier than on those pruned in the spring.

The trimming of fruit trees should occur a week before mid-summer, but if neglected at that time, they may be trimmed now. The exposed ends, however, should receive a slight coating of mastic dissolved in alcohol. The alcohol will pass off by evaporation, while the mastic will render the exposed portions water proof. The coating will be so thin as not to prevent the closing over of the bark by future growth, while the wood will remain bright and clean, instead of becoming dotted, and permitting the bark to close over a decayed portion.—*Working Farmer.*

For the New England Farmer.

THE HORSE DISTEMPER.

ON THE DISEASE NOW PREVAILING AMONG HORSES—TYPHOID INFLUENZA—ITS NATURE—SYMPTOMS—AND TREATMENT.

There is a disease now prevailing among horses in this State, which in stable language passes under the familiar terms, *horse-ail*, *pink-eye*, *distemper*, &c. &c. It seems to prevail most extensively among what are termed *coarse-bred* horses, such as are used in the trucking business, or any other laborious work. In fact, a case occurring in a well-bred horse has not yet come to my knowledge. In some localities it spreads after the manner of epidemic, enzootic, and sporadic affections; appearing here and there in certain localities, with greater or less intensity; sometimes singling out half a dozen horses, out of a stable of twenty; at other times, and perhaps in a contiguous atmospheric locality, it runs through a whole stable of the same.

At the present time there are a great number of truck horses laid up with this typhoid affection; a great proportion of them are doing well, and up to the present there have been very few deaths. So that there is no foundation, in fact, for the unfavorable reports that are now circulating.

I have named the disease typhus, because it appears under the form of persistent fever, marked by great debility, and gastro-intestinal symptoms; and two *autopsies*, that I have been permitted to make, revealed the usual evidences of a typhoid affection.

SYMPTOMS OF THE DISEASE.

It generally commences without any other warning than a little weakness and loss of appetite; soon the animal becomes so weak that on urging him to walk across the stable, he reels as in delirium, and if hurried, or handled roughly, he is liable to fall. The sclerotic and conjunctival membranes of the eye are reddened, yet present a yellow tinge. The eyes and eyelids have a languid appearance, resembling those of a horse laboring under influenza. The membranes of the mouth are also reddened, yet have a more marked tinge of yellow than those of the eye. The tongue is generally coated, with a white or brown fur, and the breath is

fetted. This yellow tinge of the surfaces is indicative of functional derangement of the liver. The membranes of the nasal passages are congested, and sometimes we have a slight discharge of viscid matter from the nostrils.

The respirations are more or less laborious and accelerated, and the least muscular movement will augment both arterial and respiratory actions. On applying the ear to the trachea, a sort of mucous rale will be heard; there is generally some soreness of throat; enlargement of the thyroid glands, accompanied by slight cough.

The pulse is almost always irregular and feeble; the nose, ears, limbs and tail, are cold: the urine and feces are both scanty and fetid.

Such are the prominent symptoms of this disease; they may vary both in duration and intensity, but the symptoms as above described are generally present during its early stage. As the disease progresses, we have a complication of disease within the abdomen and thorax, and the patient is afflicted with excruciating torment, indicating inflammation of the gastro-intestinal surfaces, and he exhibits the usual symptoms manifested by horses when laboring under gastro-enteritis.

At this stage, the disease, if properly treated, may take a favorable turn; some mild cases, however, are marked by an absence of enteric symptoms; in either case, the animal may be troubled with a cough, yet gradually recovers.

The disease is apt to run on to the last, or putrid stage, in animals of inferior vital resistance, whose constitutions have been shattered by previous disease; and horses, also, in a state of plethora, unless they have been under active treatment, are in the same predicament; while the disease, if seen early and properly treated, can be cut short. There is one curious circumstance that has been noticed, and that is, various forms of disease, differing essentially in their symptoms from the above, are apt to merge into a typhoid affection. So that horses at the present time, showing any symptoms of illness, ought to receive early attention.

GEORGE H. DADD,
Veterinary Surgeon.

For the New England Farmer.

THE STRIPED SQUIRREL.

MR. EDITOR:—I noticed in the *Farmer* of the 10th, a paragraph giving a description of the manner in which the striped squirrel digs his hole in the ground. Your correspondent says that naturalists, and every intelligent farmer, ought to know that he carries away the dirt in his cheeks, and goes on to prove it. Now sir, he must be very much mistaken, or chitmucks differ in New Hampshire from those in Massachusetts, in respect to digging their holes. This squirrel commences his hole, and digs in a slanting manner till he reaches a depth below the frosts of winter; there he digs a basin, or room, large enough for himself and a deposit for his winter stores—then he digs straight up to the surface, and fills up the hole where he first commenced. As a proof of this I have dug them out of a new burrow, found their store of corn, chestnuts and acorns, and followed out their hole to where they first begun, and there I found their pile of dirt. One burrow undisturbed will last for years.

J. H. WHITNEY.
N. E. Village, Nov., 1855.

For the New England Farmer.

REPLY TO "R. E. G."

BY THE "PEASANT BARD."

I read your lines, my unknown friend,
From the beginning to the end.
Not half the verse that's now-days penn'd
Is worth the reading;
Scarce could the subject, e'en, be kenn'd
But for the heading.

But, sir, I'll bear you witness now,
A man may guide the plodding plow,
With hands like horn, and sweaty brow,
Rugged and strong,
And yet all gloriously endow
His day with song.

Thanks for your kind inquiries;—I
Will scribble something in reply,
Although small time, just now, to try
The fine or funny;
For I'm as busy as a fly
O'er pot of honey.

I'm well, thank Him who has our keeping,
And who, we're told, is never sleeping;
In fact, if all, like me were reaping
Hygeia's plains,
The "faculty" would all be weeping
In doleful strains.

You ask:—"Potato-digging loon,
How came'st thou by so rich a boon,—
Namely the MUSE's golden spoon—
At which folks stare?"—
How came we by the sun and moon?
Don't know;—they're *there*.

"What do I feed upon?"—In chief
The best of cabbage, pork and beef;
Potatoes, also;—to be brief,
Just come and see,
Indulging ever the belief
I'd welcome thee.

"My drink?"—Good friend, 'dye ever see
A Temp—(hic!)—rance So-cl-e-ty?
Down with your name, and give that "speer"
A fair acquittal;
You're answered!—sober men, like me,
Are non-committal.

My sympathies I freely spare
For all your farmer's toil and care;
I know full well just what they are,
E'er you made mention.
I've done hard work enough to share
A M^hral pension.

O! had I lived when last was blown
War's trump, and down our gauntlet thrown
At Britain's foot; had I but known
Two week's parade,
As fine a "section" I might own
As God e'er made.

But, with enough, who should complain?
Pipe with me, friend, a cheerful strain,
Long live the FARMER, shout again
With pow'r of voice;
Be the Lieutenant yet again
The people's choice!

Attention! brothers of the Flow.
File front!—I mark each "soger" brow;))
Halt! Dress!—before no king ye bow
With knees a slappin';
No, sirs! but all attention! now—
Salute your captain!

GUN, Nov. 26, 1866.

BIOGRAPHY.

We present, to-day, in another part of this number, a short biographical sketch of FREDERICK HOWES, Esq., of Salem, late President of the Essex County Agricultural Society. This tribute to the memory of a good and useful man was adopted by the Board of Trustees of the Society upon motion of our attentive correspondent, JOHN W. PROCTOR, Esq., of Danvers.

Similar sketches of the lives of those who have cherished and promoted the cause of agriculture will be useful in several respects: they will recall their virtues, for us to copy; relate to us their principles of culture and their modes of operation, and tend to inspire us with the same zeal and energy which actuated them. We hope, therefore, that our correspondent, and others who have the means at hand, will favor us with concise sketches of persons who have been eminent in promoting the interest which we believe to be at the root of our national prosperity.

PHOSPHATES—THEIR USE.

The following letter from Professor Liebig on the value of phosphates, cannot be too often read by those who would understand the more important facts connected with agriculture:

MY DEAR SIR:—My recent researches into the constituent ingredients of our cultivated fields have led me to the conclusion that, of all the elements furnished to plants by the soil and ministering to their nourishment, the phosphate of lime, or rather, the phosphates generally, must be regarded as the most important.

In order to furnish you with a clear idea of the importance of the phosphates, it may be sufficient to remind you of the fact, that the blood of man and animals, beside common salt, always contains alkaline and earthy phosphates. If we burn blood and examine the ashes which remain, we find certain parts of them soluble in water, and others insoluble. The soluble parts are common salt and alkaline phosphates; the insoluble consists of phosphate of lime, phosphate of magnesia, and oxyd of iron.

These mineral ingredients of the blood—without the presence of which in the food, the formation of blood is impossible—both man and animals derive, either immediately or mediately, through other animals, from vegetable substances used as food; they had been constituents of vegetables, they had been parts of the soil upon which the vegetable substances were developed.

If we compare the amount of phosphates in different vegetable substances with each other, we discover a great variety, while there is scarcely any ashes of plants altogether devoid of them, and those parts of plants which experience has taught us are the most nutritious, contain the largest proportion. To these belong all seeds and grain, especially the varieties of broad-corn, peas, beans and lentils.

It is a most curious fact, if we incinerate grain or its flour, peas, beans and lentils, we obtain ashes, which are distinguished from the ashes of all other parts of vegetables by the absence of alkaline car-

bonates. The ashes of these seeds, when recently prepared, do not effervesce with acids; their soluble ingredients consist solely of alkaline phosphates, the insoluble parts of phosphate of lime, phosphate of magnesia, and oxyd of iron; consequently, of the very same salts which are contained in blood, and which are absolutely indispensable to its formation. We are thus brought to the further indisputable conclusion, that no seed suitable to become food for man and animals can be formed in any plant without the presence and co-operation of the phosphates. A field, in which phosphate of lime, or the alkaline phosphates, form no part of the soil, is totally incapable of producing grain, peas, or beans.

An enormous quantity of these substances, indispensable to the nourishment of plants, is annually withdrawn from the soil and carried into great towns, in the shape of flour, cattle, et cetera. It is certain that this incessant removal of the phosphates must tend to exhaust the land and diminish its capability of producing grain. The fields of Great Britain are in a state of progressive exhaustion from this cause, as is proved by the rapid extension of the cultivation of turnips and mangel-wurzel—plants which contain the least amount of the phosphates, and therefore require the smallest quantity for their development. The roots contain 80 to 92 per cent. of water. Their great bulk makes the amount of produce fallacious, as respects their adaptation to the food of animals, inasmuch as their contents of the ingredients of the blood—that is, substances which can be transformed into flesh—stands in a direct ratio to their amount of phosphates, without which neither blood nor flesh can be formed.

Our fields will become more and more deficient in these essential ingredients of food, in all localities where custom and habits do not admit the collection of the fluid and solid excrements of man, and their application to the purposes of agriculture. In a former letter I showed you how great a waste of phosphates is unavoidable in England, and referred to the well known fact, that the importation of bones restored in a most admirable manner the fertility of the fields exhausted from this cause. In the year 1827, the importation of bones for manure amounted to forty thousand tons, and Huskisson estimated their value to be from one hundred thousand to two hundred thousand pounds sterling. The importation is still greater at present, but it is far from being sufficient to supply the waste.

Another proof of the efficacy of the phosphates in restoring fertility to exhausted land is afforded by the use of the guano—a manure which, although of recent introduction into England, has found such general and extensive application.

We believe that the importation of one hundred weight of guano is equivalent to the importation of eight hundred weight of wheat,—the hundred weight of guano assumes, in a time which can be accurately estimated, the form of a quantity of food corresponding to eight hundred weight of wheat. The same estimate is applicable in the valuation of bones.

If it were possible to restore to the soil of England and Scotland the phosphates which during the last fifty years have been carried to the sea by the Thames and the Clyde, it would be equivalent to manuring with millions of hundred weights of bones, and the produce of the land would increase one-

third, or, perhaps, double itself, in five or ten years.

We cannot doubt that the same result would follow, if the price of the guano admitted the application of a quantity to the surface of the fields, containing as much of the phosphates as have been withdrawn from them in the same period.

If a rich and cheap source of phosphate of lime and the alkaline phosphates were open to England, there can be no question that the importation of foreign corn might be altogether dispensed with after a short time. For these materials England is at present dependent upon foreign countries, and the high price of guano and of bones prevents their general application, and in sufficient quantity. Every year the trade in these substances must decrease, or their price will rise as the demand for them increases.

According to these premises, it cannot be disputed that the annual expense of Great Britain for the importation of bones and guano is equivalent to a duty on corn—with the difference only, that the amount is paid to foreigners in money.

To restore the distributed equilibrium of constitution of the soil—to fertilize her fields—England requires an enormous supply of animal excrements; and it must, therefore, excite considerable interest to learn that she possesses, beneath her soil, beds of fossil guano, strata of animal excrements, in a state which will probably allow their being employed as a manure at a very small expense.

The coprolithes, discovered by Dr. Buckland (a discovery of the highest interest to Geology,) are these excrements: and it seems extremely probable that in these strata England possesses the means of supplying the place of recent bones, and therefore, the principal conditions of improving agriculture—of restoring and exalting the fertility of her fields.

In the autumn of 1842, Dr. Buckland pointed out to me a bed of coprolithes in the neighborhood of Clifton, from half to one foot thick, enclosed in a limestone formation, extending as a brown stripe in the rocks, for miles along the banks of the Severn. The limestone marl, of Lyme Regis, consists, for the most part, of one-fourth part fossil excrements and bones. The same are abundant in the lias of Bath, Eastern and Broadway Hill, near Eversham. Dr. Buckland mentions beds, several miles in extent, the substance of which, consists, in many places, of a fourth part of coprolithes.

Pieces of the limestone rock of Clifton, near Bristol, which is rich in coprolithes and organic remains, fragments of bones, teeth, &c., were subjected to analysis, and were found to contain above eighteen per cent. of phosphate of lime. If this lime stone is burned, and brought in that state to the fields, it must be a perfect substitute for bones, the efficacy of which, as a manure, does not depend, as has been generally but erroneously supposed, upon the nitrogenized matter which they contain, but on their phosphate of lime.

The osseous breccia found in many parts of England deserves especial attention, as it is highly probable that in a short time it will become an important article in commerce.

What a curious and interesting subject for contemplation! In the remains of an extinct animal world, England is to find the means of increasing her wealth in agricultural produce, as she has already found the great support of her manufacturing industry in fossil fuel—the preserved matter of

primeval forests—the remains of a vegetable world. May this expectation be realized! and may her excellent population be thus redeemed from poverty and misery.

For the New England Farmer.

READING, A PREVENTIVE OF DOTAGE.

MESSES. EDITOR AND PROPRIETOR:—The annual consultation is over, and our folks conclude that we must allow ourselves the luxury of reading the *Farmer* another year. I have sometimes thought it would be interesting to trace back to the pockets of your "patrons" the dollars which, at this season of subscribing, are flocking into the treasury of the *Farmer*, and by some sort of clairvoyant faculty to review the various processes of reasoning by which close-calculating farmers satisfy themselves thus to part with their money. But as I am neither a clairvoyant nor a "medium,"—as neither the spirits of the dead nor of the living will respond from their misty depths to any invocation of mine, I must be content with the far less poetical task of divulging one of the considerations which in my case, did much to "kick the beam" against the subscription price of the *Farmer*.

It is a common remark that the scenery of the "Hill of Life," over which all of us are wending our devious ways, is ever changing. To those who have just commenced its ascent, every step towards its glowing summit discloses a wider and more glorious prospect; while to those who are on the downward slope, the prospect gradually narrows and mingles with the shades of approaching night. I find myself in the latter class. I am growing old. And it is natural, therefore, that I should be influenced by considerations different from those which move the young, and that we should even perform the same act from different motives. Various and cogent are the reasons that are especially urged upon the young for agricultural reading and study. Are there not those as peculiarly applicable to the aged?

I think it was Mrs. Child who said of female education, one great object should be to teach them to grow old gracefully. Would not a similar truth in respect to the education of the other sex be expressed by saying, they should be taught to grow old usefully? Those who are students all their lives generally enjoy a "green old age" intellectually, while those who neglect the cultivation of their minds, or who suspend it in middle life, often end their days in a state of dotage that exhibits humanity in its most deplorable aspect. Benjamin Franklin, John Quincy Adams, and many others whose names will recur to every reader, were hard students all their lives, and their intellectual faculties were undimmed by age, although they lived far beyond the usual limit of human life. Like the sinews of the body, the energies of the mind are strengthened and enlarged by exercise, and are dwarfed and shrivelled by disuse. Farmers cultivate the one, and neglect the other. They work too much, and study too little. Removed from those excitements of thought and discussion which are afforded by the denser population of the village or city, farmers have probably ever been more subject to mental decline in old age than any other class. An erroneous idea respecting education has probably done much to aggravate the evil. While

farmers are careful to secure for their children a good "schooling," they too often require the books to be closed when the school closes, and allow them to be opened again only when the school opens, with the belief that an education once acquired is something that cannot be lost; something of which no reverses, no inattention, no lapse of time, can deprive themselves or their children.

I believe that cases of extreme imbecility or second-childhood are less frequent now, in this country, than they were a hundred years ago. And this opinion is based mainly upon what old people, with whom I was familiar in my boyhood, told me of those who were aged, when these old friends of mine were young—a period of just about one hundred years ago. Among many similar instances, my grandfather used to relate the case of an old man who had forgotten his own children, and who on the return of one who had been long absent, resolutely denied that he ever had such a son!

At the present time, when newspapers are issued daily, and even several times a day; when magazines and books are made by steam; and the news of the day carried all over the country by flashes of lightning, it is no easy thing to get ourselves back among the realities of even one hundred years ago. At that time no paper was published in New England out of Boston. Mr. Thomas says that, "in 1754, four newspapers only were printed in New England; these were all published in Boston, and, usually, on a small sheet; they were published weekly, and the average number of copies did not exceed six hundred from each press." This weekly circulation of about twenty-four hundred papers, in all New England, was mostly confined to literary and professional men—in the words of one of their editors, to "Gentlemen, Merchants, and Others, his usual Customers." Farmers, then, did not read papers, for there were none for them to read; and books, excepting the Bible, Psalter and Almanac, were no more common. About this time, however, newspapers began to multiply, books were printed, pamphlets were circulated, and the discussion of colonial rights which preceded the Revolution, gave to the people an interest in political events and principles, which that long struggle, and the subsequent establishment and operation of an independent government, have not only kept alive but greatly deepened.

With this view of the subject, after all that may be said against political papers and political excitements; after all the shame-facedness we may have to put on for the extravagances into which we and our friends are sometimes led; after all the animosities that a "campaign" engenders are duly lamented,—we may still believe that they produce at least one very important beneficial result. They exercise, invigorate and strengthen the powers of the mind; a good that may safely be weighed against many evils that alarm some of our quiet-loving citizens.

Now, if such has been the effect of papers whose conductors have too often looked to office-holders, or office-seekers for support, or who have sometimes regarded and used their journals as stepping stones for their own political elevation, may we not reasonably indulge much larger hopes and more sanguine anticipations of the benefits which are to accrue from the rapidly increasing demand and supply of agricultural papers? If political questions have done thus much to keep the mind from the

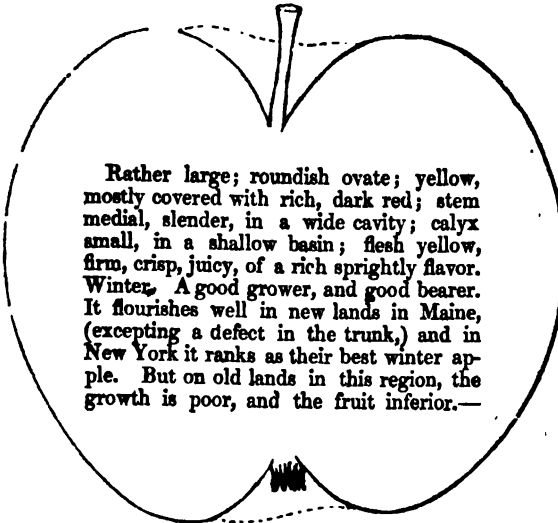
torpor of old age, may we not believe that the persevering study of agriculture, involving as it does the most noble and elevating subjects of investigation and thought which the broad fields of science afford, and being withal so congenial to the tastes and habits of the aged, will do still more to promote the vigor of their minds, and to counteract their natural inclination to repose and inaction?

With such belief I renew my subscription to the *Farmer*, and hope that it may continue to direct the young, to encourage the middle-aged, and to send the invigorating blood of new thought through the minds of the aged.

S. F.

Winchester, Dec. 25, 1855.

ESOPUS SPITZENBERG APPLE.



Rather large; roundish ovate; yellow, mostly covered with rich, dark red; stem medial, slender, in a wide cavity; calyx small, in a shallow basin; flesh yellow, firm, crisp, juicy, of a rich sprightly flavor. Winter. A good grower, and good bearer. It flourishes well in new lands in Maine, (excepting a defect in the trunk,) and in New York it ranks as their best winter apple. But on old lands in this region, the growth is poor, and the fruit inferior.—

When well grown, it is rather superior to the Baldwin in quality, but inferior in growth, fairness, and bearing. Origin, Esopus, N. Y.—*Cole's Fruit Book*.

FISH GUANO.

We have received a sample of *Fish Guano*, manufactured by the Narragansett Manufacturing Company. If *taste* and *smell* afford any evidence of its virtues as a fertilizer, we think this article must have a powerful influence on any crop. The Indians used a dead herring for each hill of corn, and obtained fine crops; so people now living near the sea-shore, and having access to fish, increase the fertility of their soil thereby wonderfully. If this article is made up, mainly, of fish, it will prove valuable, as the bones, in the minute state in which we find them, are exceedingly useful, especially on our old soils. S. B. HALLIDAY, Providence, R. I., is the Agent of the company.

Rollin H. Sanford's fine house in Brooklyn, furniture, pictures, &c., were nearly destroyed by fire on Saturday morning.

BREAKING COLTS TO BIT AND HARNESS.

Much may done with young horses in the way of cultivating their good manners, and forwarding their education—or breaking, as it is termed—before the aid of the colt-breaker is required. Foals should be accustomed to familiarities, fondling, and kind usage, from their birth; and if that kind treatment be continued as they grow up, they will occasion very little trouble when the time arrives for them to be broken. Before that operation is commenced, it is desirable that a bit should be placed in the young animal's mouth. Any plain snaffle of sufficient substance will answer the purpose. There should not be any reins attached to it; it should be merely suspended by the head piece. The colt will thus learn to play with the bit, which will tend very materially to the establishment of a good mouth, care being observed that the bit is suspended evenly by the proper length of the head-piece. This may be adjusted by any quiet, good-tempered person, to whose care the young creature is entrusted, and may be left on from one to two hours daily. A loose box, hovel, or small yard, are the most suitable places for the purpose.

It is a very bad custom, though a very prevalent one, when a young horse is first bitted, to make use of reins, which are drawn tight. A colt-breaker when employed, should therefore be cautioned against it, for it will cause the pupil to contract a habit of leaning on the bit, and probably create a one-sided mouth. By such treatment, many colts will take a position in one corner of the box or hovel, and there stand and sulk; whereas if the bit be used as I have recommended, they will champ and play with it freely, thereby producing the sensibility of mouth which is essential to future perfection.

Breaking to harness may be considered necessary with such horses as are adopted for carriages; and their services after they are three years old may be advantageously called in requisition on the farm. Their first introduction should never be to a noisy, heavy cart. The plan which I have adopted, with invariable success, has been to put the harness on so that the animal may become quite familiar to it in the stable, after which I have a cord attached to each trace. The horse is then led out by an assistant, and another man, with the cords in his hands, offers a slight resistance, as the animal moves forward; by this initiation the alarm frequently occasioned by the pressure of the collar against the shoulders is avoided, as the man who holds the cords can instantly relax them if necessary. After two or three lessons of this kind, neither trouble nor danger need be apprehended in putting the animal to any employment calculated for the advancement of his education in the art of drawing.—*London Farmers' Magazine*.

The annual value of poultry in the United States is estimated at twenty millions of dollars. The city of New York expends yearly a million and a half of dollars in the purchase of eggs alone.

For the New England Farmer.

WHAT A FARMER'S EDUCATION SHOULD BE.

MR. EDITOR:—What kind of education do farmers require, different from other classes, may be asked by those engaged in other employments. Now it may be a difficult matter to determine just what kind of education farmers should possess, in order to qualify them for their vocation and position in life. Still, some ideas on this subject may not be out of place; if farmers can be induced to think on the subject, it will have at least a good look towards improvement on this point. Any education that a farmer can pick up, of course, will be better than none, or, at least, a very scanty one,—a fact which many farmers, as well as other men, are too apt to content themselves with. In fact, a farmer should consider that his education is never finished until he lays his body down in the grave, and this fact will hold good when applied to all classes of people. Now we have a great deal in the world at present, among all classes, which passes for education, but in reality it is just no education at all. That is to say, it is not that kind of education which serves to lead a man to become an honorable, upright and useful citizen. A man may have a great deal of what the world calls knowledge, yet in reality be not educated, after all, in a strict sense.

Education proper, means, as I understand it, the fitting, training and preparing one's self for all the duties which men have to do with in this life. Now a farmer's education should be of that character which partakes largely of the practical in all things that he has to do with. He should see the necessity of fitting himself for his own position in life, and he should adapt his means to that end; he should feel, also, that he has a peculiar work to perform; he should feel, in reality, that no one else can do that work but himself, which is true in every sense of the word. But then a farmer's education, in the main, should be directed with a particular reference to his business on the farm; because, it is from that source that he derives his living, and it is there that his forte lies, and if he does not succeed in making a point there, he will hardly do so in anything else. Now, while I cannot lay down any rule to guide or govern all in this matter, yet I may be able to throw out some ideas, which, if improved upon, will result in benefit to all concerned. I have become satisfied, too, from personal observation, that a farmer's education, if it is ever obtained at all, must be got upon the farm.

Of course, there will be exceptions to this rule, but a home education is what the mass of farmers must depend on, or a system of self-instruction. And in reality, this is the place for it, so far at least as all practical instruction relates to it, whether it be on the farm, or self-improvement as relates to a general education. In fact, I believe that the farm is a better place to get a practical education, such an education as will both be useful and profitable, than any other position in which a man can be placed. I might go on to say how a farmer should fit himself to fulfil all the duties which devolve upon him as a citizen, how he should educate himself so as to meet all the exigencies which men have to encounter. But it may not be practicable, or even necessary, now to do this, as when men are wanted to fill any particular position in life, they can generally be found, though it may be difficult

always to find just the right men. Still, if the right men have fitted themselves for any position in life, which circumstances and time may bring about, then, of course, the right men can be found, so that nothing will be lost by farmers in obtaining all useful information on all other subjects which may present themselves for investigation.

Now, it is well known that the farmer, the mechanic, the manufacturer, the professional man, the scientific man and the scholar, each of these, have their particular ideas in which they view matter and things. Namely, the practical men and the theoretical; some, perhaps the majority, will incline largely to the practical view of things, while others will incline more to the theoretical side; now, which is right and which wrong? The farmer says the great and leading points of a farmer's life are the practical, and it is true. But then I claim that this is just as true in regard to the professional man, scientific man and scholar. Why not? Still, while I lay the principal claim to the practical in all things, at the same time the theoretical is worthy of attention and study. In fact, theory many times precedes practice, not by speculation so much, as in opening the way for practice, which comes along either to refute or sustain, as the case may prove to be. Now, to my mind, where theory and practice can be made to harmonize and work together, each in its own way, without clashing with each other, that system of education will be the most perfect and useful in all things.

In these days the question is often put, what kind of studies should the young farmer pursue, or the scholar in school study, in order to make the young man an educated one in after life? To this question, almost as many answers might be given as you have men to deal with; some would say, perhaps the majority, that in order to make the farmer a thorough scholar, he must go through a regular course of scientific studies, dead languages and all, in order to come out right in the end. Others will say they wish their sons to have a thorough, practical and scientific education, such a one as will have a direct bearing on their practical business, and in all other relations in life; still, the dead languages they want no time spent with, as in reality they consider them of no consequence whatever. Now what I contend for, is an education; I do not care so much how they get it, as that they shall have it at some rate. Still, if parents feel disposed to put their sons through college, dead languages and all, then do so; they can make good farmers after they get through; that is to say, if you can get them there, a question which will remain to be tried.

Now, while I freely admit that this course can make thorough going scholars and scientific farmers, yet I claim on the other hand, that as thoroughly scientific farmers and as good scholars can be made without any aid from the dead languages, or heathen mythology, as with it. And why not, we ask? What great difference does it make, just what path you take to gain a certain point, provided both paths come to the same thing finally? The question is not put as to how much Greek and Latin you are able to read and master, or whether you can read any at all; but the greater question is, have you got a good practical and scientific education, such a one as will lead you to become a good farmer, and an honorable, useful and upright citizen. If so, then all right; you can pass along. Now it

may be that where men are preparing themselves for any particular field of action, that it will be necessary for them to follow such pursuits and studies as will fit them for such calling. But however many recommendations may be laid down for farmers, and especially young ones, to get an education, yet it is known that but very few out of the mass can avail themselves of any such plan as I might and should be glad to lay down for their benefit. So, for that reason, I want to give out some ideas that will be applicable to them at home by their own firesides, and on their own farms. If I were to offer some far-fetched and dear-bought and out-of-the-way scheme, such a plan as not one in ten or twenty could practice, if they were ever so disposed to, then the object I have in view could not be attained.

Hence a plan that will suit all classes to follow after, is the one in general to be adopted. Of course, it is plain to begin with, that the masses of young men preparing themselves to cultivate the soil cannot obtain what is called a classical or scientific education for reasons that every body knows well. Then if this be the case, what is the use or propriety of recommending such an education for the great body of cultivators when they cannot adopt it or anything near it. How much more humane it will appear, when a feasible plan is offered, which every one can adopt, for then you reach that class that stand most in need of instruction.

Those who are capable of instructing and teaching in this business, should always remember that the pupils are the masses, as a general thing, who need instruction and will not come to the teacher for it, because there is a natural diffidence in them that keeps them back. Hence the teacher or instructor must take his teachings and carry them to the people; or in other words, he must give out his instructions in such a plain, practical way, that the people can appreciate and adopt them for practical use. The few who have means, can, of course, get an education any way. It is not those that I speak of: but it is the body of working people who want the best practical method shown to them for instruction, one that will meet them at their own homes and firesides. But then the working farmers should remember that, after all the teachings and instructions they may receive, and other advantages for getting an education, it will depend upon their own efforts at self-instruction whether they make progress or not in the undertaking. That the great body of working farmers will be ever educated, according to the general sense of that word, I do not expect, nor do I consider it of great consequence whether they are or not. What I want to see is the farmers making the best use of means within their reach to obtain a good thorough-going education. If they do this it is all that can be expected reasonably by any one. Farm schools and colleges are being instituted for this purpose, where young farmers can get a good practical and scientific education; of course, all who can should avail themselves of such instruction.

L. DURAND.

SINGULAR APPLE.—An apple was brought into the Boston market for the first time the present season, from New Hampshire, where it has received the name of "*No-blow*." It is a most remarkable apple in its appearance, as well as in its character. It is about as near square as round, for it is neither.

Its shape is oblong, and it looks like a club foot. It is a passably good apple for eating or cooking. The tree on which it grows stands in a pasture, where it is said to have come up from a dropped seed, and never blossoms—the fruit rarely having any seed! Some of the specimens have little green coated protuberances around the calyx, but they contain no seed. The apple is not entirely coreless, having the usual appearance of an apple core in the flesh, but wholly without seeds. The following is a description of the fruit as accurately as we can give it:

Size above medium but not large, measuring ten and a half inches in circumference over the stem and calyx ends, and eight and a half around the middle of the apple; color greenish, speckled with russet, with a large deep red blush, spotted like a Baldwin, on one side. Stem an inch long, serrated, and set in a deep cavity. One side of the apple resembles a Baldwin, and most of the other side a greenish russet. The flesh is yellowish, and flavored like the Baldwin and Rhode Island greening, becoming tender and pleasant to the taste. The calyx is almost without a basin, being the mere gathering in of the skin, having little green protuberances around it, looking like seed vessels. The shape of the fruit is very irregular, though constantly adhering to its form. It bulges out around the top, and is smaller below the middle.—*Bunker Hill Aurora*.

THE DYKES OF HOLLAND.

The dykes, at first sight, strike the beholder as no extraordinary work; and it is not until we find that a considerable part of the country of Holland lies some twenty-four feet beneath the level of the sea at high-tide, and that it has merely a fence of mud-banks to fortify the land against the terrors of invasion from the host of waters about it, that the mind becomes awakened to the vastness and importance of the structures. Nor is it in summer-time, when the surrounding rivers are half-dried up, and the ocean without is placid and beautiful as some vast lake, that we are able to arrive at a sense of the protection afforded by the belt of sea-walls to the people within them; but only during the tempests of winter, when the terrible waves are towering to the sky, like liquid mountains, and the tide has risen many feet above its usual height, owing to the immense body of water from the Atlantic having been driven by the gales across the German ocean towards the narrow straits of Dover, and there being dammed up as it were, so that the vast flood is forced back upon the Dutch coast, and leans all its stupendous weight against the ridge of dykes around the Nether-country. It is at such times, indeed, that we learn how much property and how many lives depend upon the strength of these same ocean bulwarks. It is fearfully interesting then to walk at the foot of one of the great dykes, and to hear the heavy waves beating like so many batter-rams against the outer side of the mud wall, and to know by the noise that the ocean is already some twenty feet above the head. The dykes are sometimes forty feet high, and their foundation, which is generally of clay, is from 120 to 150 feet in width. The dyke itself is composed of clay—if not entirely, at least on the outside; and the interior is filled with a mixture of earth, clay, and sand. The face of the dyke is thatched, as it

were, with willow twigs, interlaced into a kind of wicker-work, the interstices of which are filled with puddled clay. The wicker-work lasts but a few years; so that as it requires to be repeatedly renewed, a number of willows have to be grown in Holland for the purpose. The base of the dyke is generally protected by masonry, and strengthened by large heaps of stones and rows of piles; while the summit is mostly planted with trees, because their roots are found to bind the soil firmly together.—*Mayhew's Rhine.*

CARROTS FOR SWINE.

According to ARTHUR YOUNG, carrots and parsnips are better food for swine, while fattening, than potatoes, and some persons do not hesitate to assert that parsnips are superior to either for feeding them. A writer in one of the English agricultural journals asserts that they fatten all their pork in the island of Jersey on this root. They contain a large amount of saccharine matter, and in this important particular are superior to carrots; and it is well known that no vegetable fattens swine more rapidly than sugar cane. Perhaps in this respect the French sugar beet is superior to the parsnip, as it exceeds it in the amount of the sugar-making principle; but whether, on the whole, it would be as salutary, when used as a constant diet, is a matter admitting, we think, of some doubt. The quantity of these roots, which, under favorable circumstances, may be grown on an acre, is much greater than has generally been supposed. Of carrots, we believe as many as sixteen hundred bushels per acre have been realized in this State, but such a yield is only to be expected, of course, where the ground is in a very high degree of cultivation, and where great care and attention are bestowed on the crop. But supposing one-half of this large amount can be produced, and allowing the roots to possess a value equal to potatoes for feeding swine and other domestic animals, we shall perceive that the balance will be considerably in favor of the former. The labor of tending an acre of carrots or parsnips, is, it is true, considerably greater than that involved in the cultivation of the same extent cultivated in potatoes; yet this is not *all* loss.

All tap-rooted crops, like the parsnip, carrot, and beet, effect a certain amelioration in the lands upon which they grow, by pulverizing and disintegrating its particles, and rendering it more light and pervious. The process of preparing the soil for the reception of the seed, and the method generally pursued in cultivating and removing the crop, contribute also very materially to this result. In some parts of Europe this amelioration is regarded of so much importance, that the cultivation of root crops, once in a certain number of years, is entered as a condition in all leases, and its fulfilment rigidly exacted and enforced. That it is not too highly estimated, is demonstrated by its highly beneficial effects, which are too obvious to be misunderstood.

For the New England Farmer.

THE OPEN POLAR SEA.

IS THE EARTH HOLLOW?

It appears that late discoveries in the Arctic regions have resulted in establishing the fact that it is much warmer towards the North Pole than about the latitude where Sir John Franklin and his crew perished, or where former navigators had reached; and that there is an *open Polar Sea*, some 3000 miles across. Various speculations are afloat to account for it. The *United States Gazette* says:

"One writer attributes it to the subterranean passage of tropical waters from equatorial seas to the polar regions. Another finds the cause in some supposed great agitation of the winds about the poles of the earth, consequent upon the motions of the latter. A third calls attention to the well-known fact that the earth is an oblate spheroid, and that the flattening of the poles brings the latter nearer to the internal fires believed to exist at the centre of the globe than any portion of the surface. A fourth revives Symmes's famous theory that the earth is hollow and open at the poles, and adds that this opening, must have been caused by the rupture of the earth's crust by the internal fires, the heat of which, emitted from the opening, keeps the Polar Sea free of ice, and milder in temperature. The same writer undertakes to prove Symmes's theory from the book of Job. If the Polar Sea is not accounted for, it will not be for lack of theorizing."

Now I do not know but that the theory that the earth is hollow is as likely to prove correct as any other of the above theories. The theory that the warm water at the North Pole is caused by a "subterranean passage of tropical waters from equatorial seas to the polar regions," does not look very plausible; for what agent in nature is in operation to cause such a flow of equatorial waters? If such a flow of water from the South, sufficient to heat the northern Polar Sea, is constantly moving on, what becomes of it when it gets to this open Polar Sea? Would it not, in that case, flow back to the North on the upper surface of the sea? But there is evidence that it does not, as the fact of the moving of the Gulf Stream from south to north, on the sea's surface, shows the fallacy of that theory.

As to the agitation of wind about the Pole, to keep the sea open, it is not at all probable. I should suppose if any part of the earth endured a dead calm, it would be the region about the pole, as the diurnal motion of the earth near the pole is so small that it cannot be subjected to such fluctuation, nor by heat and cold, caused by the action of the sun on the temperate or torrid zones. The third argument advanced is, that the earth is flattened towards the poles, and therefore nearer the internal heat of the earth. But this idea is wholly *fallacious*. Is not the whole Arctic region nearer the centre of the earth than that of the temperate or equatorial region? Yes, every one will acknowledge that, who believes that the earth is an oblate spheroid—flattened at the poles; and that the surface of the equatorial region is much farther from the earth's centre. It remains, therefore, for the theory that the earth is *hollow*, somewhat like an egg shell—open at both ends—that is, at the poles of the earth. Can there not be as great or greater argument advanced that the earth is hollow, as there can be that it is one solid mass to its centre?

I think so. First; is it not conceded that nothing is made in vain—that nothing superfluous is created when the less would be sufficient? Now if it would not conflict with the eternal law of gravitation to have made this earth hollow, instead of solid, and thereby have saved one-half, two-thirds, or three-quarters of the material of which it is composed, and have one-third or more larger surface for animals and intelligent beings to perform their active life,—would not that be an economy worthy of God the Creator?

If the outer shell of the earth is (say from the fortieth degree of both north and south latitudes,) five hundred miles thick, this would leave the inner space seven thousand miles in diameter. According to the laws of attraction, every particle of the inner part of this shell would keep its place, and not fly off 7000 miles across this hollow to get to the opposite shell of the earth. Can the objectors to this theory maintain that it would? I think not. Capt. Symmes, who lectured some thirty years ago, upon the earth being hollow, and capable of being inhabited, was not the first who broached such an idea. I have in my hand a book published in the year 1813, of 179 pages, which advocates this theory. The author was Mr. Otis Paine, of Foxborough, Mass. It was entitled "*True and Infernal Friendship; or the Wisdom of Eve, and the Character of the Serpent. With the Situation, Joys and Loss of Paradise.*" It was composed principally of poetry. In its preface I find the following on page 9th:

"1st. That this earth is a *hollow globe*, containing a *celestial region* in its centre, and the same that is called Paradise, Mount Zion, and Eden, in scripture, where *Adam and Eve* and the new creation were laced when created, and whence they were driven on *eating the forbidden fruit.*"

After advancing three other propositions, which do not relate to this question, he proceeds to prove his theory as follows:

"Proof that this earth is a hollow globe, &c. By the records of Scripture, both of the old and new Testaments, it appears that there is a region, or beautiful realm, in the centre or heart of this earth; that the first created man (Adam) was formed of the dust of this earth, and put into this realm (then called Eden) to till and cultivate it, and to have dominion over all who dwelt there. But he, (Adam) breaking his Creator's law, was driven from this celestial region to till the ground from whence he was taken.

"It farther appears, by the predictions recorded in scripture, that this region will be discovered, and be inhabited with the human race; that on this discovery, a thousand years of perfect peace throughout all nations will take place, and millennium commence."

Mr. Paine then occupies over four pages of his book with extracts from various passages of scripture, and his own comments, to prove the truth of his theory.

Now, I will venture to conjecture what this "flaming sword, which turned every way," &c., was. If the Garden of Eden was in the hollow of the earth, and our first parents were "driven out," in consequence of disobedience, it was the *glittering* ~~ice~~ which from that time to this has been sufficient to keep them and their posterity from finding the entrance to the interior of the earth, but will, within a few years be overcome, according to the pre-

diction of Mr. Paine. No doubt but that the indefatigable energy of our people will have a steam-boat with a suitable crew, sailing upon this "open sea," within a few years and if there is an opening, one or two hundred miles in diameter, they will be sure to find it, and their indomitable courage will induce them to enter it, and within a year after, may return and make their report.

Yours most respectfully, ISAAC STEARNS.
Mansfield, Mass., January 1st, 1856.

P. S.—I would ask the question of you, or your correspondents, (if they see this in your paper) how long ago was it that Capt. Symmes lectured upon the theory of this earth being hollow; and also, were his lectures ever published? If so, where can I obtain a copy? I. S.

HOW TO MAKE A JIBING HORSE DRAW.

An omnibus full of passengers was detained a long time this afternoon in Oxford Street, by one of the horses turning obstinate and refusing to proceed; and notwithstanding numerous and persuasive arguments inflicted upon him by a large crowd of persons collected, such as digging spurs into him from the hand, sundry kicks and licks, cursing and swearing, &c., the horse would not advance; and when by manual force, some ten or fifteen managed, on several occasions, to move the omnibus a few paces, it resulted in nothing but a graceful *pirouette* of the whole concern back to the same spot, much to the amusement of the crowd, but not so much of the passengers, who, I must admit, maintained the greatest patience and forbearance. Observing all the endeavors of the crowd to fail in making the horse move, I suggested to the persons interested, a simple remedy used in India, on similar occasions—that is to get a slight rope, and attach it to one of the fore feet of the stubborn animal, and the person holding the other end of the rope to advance a few paces, taking with him the horse's foot, when, as a matter of course, the horses and omnibus must follow. My advice was at first ridiculed and laughed at, but after some more ineffectual attempts after their own barbarous and savage manner, a rope was produced and applied as described, when the horse immediately advanced, and the omnibus, in the course of a few minutes, was out of sight, much to the amazement of the rude and bigoted crowd. I heard them expressing their wonder and astonishment at this very simple remedy, which should be more generally known in this country.—*London Times.*

GOOD HOGS.

Mr. Cyrus Stow, of Concord, Mass., gives us an account of four Suffolk pigs, fattened by him. We saw them a short time before they were killed, and noticed that, though not remarkably large, they had great weight of carcass for the bone and offal. They were bred by C. B. Clark. Mr. Stow says—

"These four pigs (all sows) I bought on the 8th of February last. They weighed 145, 140, 130, 100—total 523 lbs.—at 5½ cents—\$27.46. Deduct for shrinkage forty per cent., would leave 314 lbs. dead weight when I purchased them. They were killed on the 15th of December, and weighed 449, 374, 366, 367—total 1555 lbs. I sold three of them at my door at 11½ cents per pound—

kept the other for my own use. Aggregate value of the four, \$178,04; deduct cost, \$27,48, leaves a gain of \$151 48. They were kept by me 309 days, and gained, as I calculate, 1247 lbs., or a trifle over a pound, each, per day—nothing to brag of if they had been high fed—but they were kept very cheaply, and had but little meal until the last month of the time, when they were fed with cob meal (corn and cobs ground together.) The remainder of the time they had the wash of the house and the skimmed milk of two or three cows, with small potatoes, and pumpkins boiled up with a little meal. I keep five cows and sell about one-half of the milk.”—*Boston Cultivator*.

WEALTH OF THE ROTHSCHILDS.

The number and amount of the loans that have been negotiated by the Rothschilds is scarcely any index of their wealth. It is not necessary that they should be worth the enormous sum of a thousand million of dollars, which has been absurdly attributed to them, in order to take, since the Crimean war, the English loan of eighty millions of dollars, the Austrian of a hundred and twenty millions, the Turkish of forty millions, an early one to Russia of one hundred and thirty millions, one to Sardinia of ten millions, another to England in exchequer bills of thirty-five millions, and a second now on the tapis of a hundred millions of dollars.

Just consider how such loans in this country and everywhere else are made. Some house, like the Rothschilds, for example, confers with its correspondents and friends of various cities, ascertains how much they will assume of a projected loan, and then rejects or accepts the proposal of the borrower on specified terms. The house named represents the whole, and perhaps is the only one recognized and known in the transaction; but takes no more of the loan, perhaps, than others not named, if so much, and may immediately, or soon, part with that moderate fraction, if a satisfactory advance can be obtained.

Negotiators of public loans in this country are not always men of large capital, but, acting in the capacity of conductors, they are merely in possession of ability to place them among those who are. They, as well as the Rothschilds, doubtless sometimes act in the capacity of brokers simply, though at others, without question, as loaners of their own capital. A merchant might as well be set down as worth five millions, because his sales amount in two years to that sum, as the Rothschilds be estimated as worth a thousand millions of dollars, because the loans they have negotiated within a few years reach that prodigious figure,—a sum comprising about one-quarter of all the precious metal of the globe.—*Newark Advertiser*.

YEAR BOOK OF AGRICULTURE.—This work is a compilation of articles and engravings, on nearly all subjects connected with agriculture, and contains a thousand suggestions valuable to the farmer who has not access to a variety of works on similar topics. It is printed handsomely, is illustrated by numerous engravings of implements and plants, among the latter, some half-dozen full large engravings of the cotton plant in its various stages. DAVID A. WELLS, Esq., a gentleman well-known

as a writer, chemist, &c., and now the principal Editor of the *Farm Journal*, published at Philadelphia, is the Editor. For sale by Ruggles, Nourse, Mason & Co., Boston.

THE FIRESIDE.

When the snow-flakes softly rattle
On the darkened window pane,
And the night winds moan and murmur
In a wild and fitful strain—
O, how welcome is the cheerful,
Brightly burning, ruddy light,
Glowing from the evening fireside,
Glowing, sparkling, warm and bright!

How the mellow beams are dancing
On the ceiling, in the hall,
E'en within the hearth's dark corners,
With a gentle glance they fall.
And in the clear and pleasant radiance,
As in the waves of gold it plays,
Melts the soul that's filled with sadness,
Lights the eye with radiant rays.

Loved ones meet around the fireside,
Through the dreary winter eve,
Whilst the storm without is wildest,
Tales of other days to weave,
Songs that to the heart are dearest,
Breathe upon the hallowed air,
Voices gay in mirth are mingled,
"Household words" are sweetest there.

How the aged and the weary
Look back to the happy hearth,
By whose merry light they sported,
Ere they tasted aught but mirth.
Though the glow has long been faded,
Brighter than of yore it burns,
When the spirit, worn with wanderin',
To that cherished vision turns.

Then, while falling snow-flakes rattle
On the darkened window pane,
Let us gather round the fireside,
Heedless of the night wind's reign.
And when life's cold winter cometh,
'Mid the darkness and the storm
We'll again in memory's chamber
Meet around the fireside warm.

For the New England Farmer.

FANCY STOCK.

WHO KNOWS WHERE IT CAN BE FOUND.

MR. EDITOR:—I am one of the "constant readers" of the *New England Farmer*, and from it have gained a deal of useful information in relation to the various matters on which it properly treats, (i. e. ruralities,) besides a great variety of pleasant and instructive reading on various other subjects. But there is one thing that I have been rather surprised at,—and that is, that people do not avail themselves more of the opportunity of advertising in its columns many things which are wanted by those who reside in the country, and particularly in suburban villages;—I refer to the various kinds of *fancy stock*, such as fowls, pigeons, ducks, geese, rabbits, and dogs of various kinds.

Now there are very many who have a taste for such things, and would gladly become purchasers, if they only knew where the sellers were to be found. In England, it is quite the fashion to advertise every such thing in the rural papers, so that if a per-

son desires to obtain any particular breed of fowls, or a well-bred sporting or watch dog, he can almost always find just what he wants at the shortest notice. I think that those who breed such animals, either for amusement or profit, would find it greatly to their advantage to heed this suggestion,—and advertise in the *New England Farmer*.

Yours ever,

A COUNTRY GENT.

WHAT'S THE USE OF AGRICULTURAL PAPERS?

MR. EDITOR:—If one of the great objects of agricultural papers should be to induce the mind to co-operate with the hands in the prosecution of their laborious task, then it is a question of first importance to those who conduct them, by what means can this object be attained?

The first thought that occurs to my mind, is, that agricultural papers must show that farming is a subject worthy of the mind.

That it is not generally so considered, I am well aware. In reading the life of Daniel Webster, we find that his father was not satisfied with his business, but murmured that it was his doom to plod upon the farm, "unhonored and unknown," while others, whom he regarded as only his equals by nature, but who had chosen the "professions," had secured both fortune and fame. And such is the common feeling of farmers throughout New England, at least. The farmer's son that would be rich or respectable, looks away from the farm for the means of attaining his object; and he has a perfect right to do so, if wealth and respectability are not the growth of the soil. If all who become lawyers, ministers, doctors, merchants, and mechanics, live easier, make money faster, and otherwise get on better than those who remain upon farms, it appears to me an utterly hopeless task to satisfy the mind that possesses a single spark of enterprise or ambition with the business of agriculture.

Here, then, we are; agricultural papers must go to work, and prove that, all things considered, farming is as desirable a pursuit as any other. If they cannot do this now, they must wait until the present rush of young men from agriculture into every other department of business, shall enable them to do so. For until this is done, by facts that will convince and by figures that do not lie, people will not be satisfied with the business. No amount of poetical flights nor of rhetorical flourishes—no talk of Cincinnatus at his plow nor of the flocks of Job—no descriptions of what agriculture has been or ought to be—will answer; they must show what it is, and, by way of contrast, what other occupations are. They must turn attention from the Websters, the Lawrences, and the Chickeringes, to the great multitude of lawyers, traders, and mechanics, above whom these individuals towered so high. We have books for the million; but we greatly need books of the million. The Life of Amos Lawrence has been written, and printed, and read. But the lives of the thousands whom that book shall entice to the city, will never be written at all, (the number that sleep in the watch-houses, it is true, may be mentioned in the daily papers, but who will look there for the followers of a great man,) unless agricultural papers shall follow up the history of her truant sons, and give us a new phase of biography—lives of the undistinguished.

But to be more direct. I believe there is among farmers great misapprehension as to the condition of the mass of those who follow other professions, especially of those congregated in our cities. I think also that agricultural papers can furnish no matter more interesting and valuable to farmers, than honest statements of the actual incomes and necessary expenditures—the troubles and anxieties—the disappointments and vexations, which are incident to professional, commercial, and mechanical life. If this were to be done faithfully, many causes of contentment, and satisfaction with the farm would be found, where in fact only reasons for envy and discontent are now seen. The Billy Grays, the John Jacob Astors, and the Stephen Grays, are taken as a sort of basis for our notions of the wealth of city merchants; the ten to twenty dollars a week that the overseers and foremen of shops sometimes receive, gives us our impression of mechanical wages; to the few distinguished men who force themselves upon our notice, in the various walks of literature and learning, are we indebted for our ideas of the honors which attach to the professions; and the "glory of war" comes from her Alexanders, and not from the thousands who butcher each other on the field of battle, or die still more miserably on the march or in the camp.

When men come to form their opinions of these professions from the great multitude who follow them as the means of a livelihood, and not from the few "great and shining lights" that, meteor-like, occasionally rise up far above the ordinary level of their associates, I believe that the humble claims of agriculture will be better appreciated.

Let agricultural papers, then, send their "reporters" not only to agricultural exhibitions, but among the office-holders at Washington, among the learned professions, among the "merchant princes" and their clerks, into the shop and factories of the mechanic and artisan, and if you please let them step into Sebastopol, where the three mightiest nations of the earth have been making corpses as men make hay; let them pry into the "private affairs" of these classes, learn what rents they pay, what bills they have to meet, and just how their money goes, then see how their children "make out" in the world, and finally look into the probate office to ascertain what sums they leave for their heirs and successors, and we shall thus have an account-current which will greatly assist in making up our balance-sheet between them and agriculture—and arguments, too, for the decision of the question with which we started,—Is farming a subject worthy of the mind?—Will it do for farmers, like good generals, to make the subject of the approaching "summer's campaign" the study of their leisure hours in the "winter quarters" to which they are about retiring? Is it proper that, like the lawyer, the farmer should studiously hunt up the authorities and precedents which bear upon the "case" in hand? May he, like the mechanic, have a "pattern" to work by? and like the physician, have his "dispensatory" to consult in administering to his uncomplaining patients?

If these queries must be answered in the negative, we may as well throw aside the agricultural paper at once. Love stories and the Pirate's Own Book can be read by our families, and ghosts and hobgoblins, stamping tables and communicating spirits, ugly neighbors and unruly cattle, may be discussed as well without a paper as with it; and

when these fail, we can at least "whistle for want of thought," and so "welcome in the peaceful evening;" or we may keep ourselves in a constant fret, and make those about us as unhappy as an envious and discontented spirit ever does, with our murmurs that we are nothing but farmers, while others are enjoying the luxury of large pay, high life, and light toil.

But if the foregoing questions can be answered in the affirmative—if we really can believe it will "pay" to think and read about farming—if we begin to mistrust that, after all, we are about as well off as the average of other professions—how agreeably does the dark side of our prospect change for the brighter and more hopeful! Let us keep it before our eyes if we can. A WINDSOR COUNTY BOY.

Winchester, Mass., Dec., 1855.

Northern Farmer.

For the New England Farmer.

TYRANT, FLY-CATCHER, OR KING BIRD.

MUSCICAPA TYRANNUS.

This bird generally selects, for a place to build, an old apple tree standing alone in some pasture skirted with wood, or on some hill-side, below which is a clear field with a few trees or bushes thereon which will serve him for standing places; from these he sallies forth in pursuit of insects that pass and repass, turning to the right, then to the left, now rising in the air with quick vibrations of his wings, then, with hawk-like motions, he skims the surface of the ground, seizing his prey at every turn he makes. Over such a field he holds supreme authority, and is a dreaded foe to black-birds, crows and hawks; even the eagle daunts not his courage; for he no sooner perceives his coming than he lowers his body to the branch on which he stands, moves his head from one side to the other, raises its feathers—then launches forth to meet him, uttering, as he starts, his twittering notes; the eagle no more sweeps in circles to reconnoitre the field below, but starts on a direct course to rid himself of his pursuer—but it is in vain—the intrepid tormentor rises above him, dives upon his back, rises again, and sweeps from side to side, while with velocity the eagle dives, then mounts almost perpendicularly to elude his hot charges; but such evolutions avail him nothing, he must leave the king-bird's precincts, or by alighting on some tall tree, when, with a few more swoops at this noble bird, the tyrant retires; and as he returns, hovering triumphantly to his place, you see his head move, as his eye follows the insects that he passes, first on one side, then on the other, until he sees one to his liking; he turns, or rises, as the case may be, snaps him in his bill, returns to his place, strikes him a few times on his stand, and devours him; thus is he as merciless with his prey, as is the eagle, with whom he disputes the right to hunt over the same field, and to every bird, larger than himself, a teasing master, who dares intrude on his presumed rights.

After having chosen the spot, which is generally on a horizontal branch, not many feet from the ground, in which to locate their nest, keeping in view the fact that the thickest foliage will best conceal it, the male descends to the ground, and brings to the place the first stick which commences

the foundation of their future home. The work is then carried on principally by the female, who with small sticks, coarse grasses, and dry flowers of the yarrow forms the outside; and for the inside, she brings small fibrous roots, but oftener fine dried grass and horse-hair, making a very neat and compact nest. The exterior diameter of it is about five inches, the interior diameter is two and three-fourths inches, and the depth two inches. The eggs are usually four, and sometimes five, in number; of a broad ovate form, and of a very pale cream color, marked with large brown spots placed in clusters with others, some of a deeper, and some of a lighter purple, chiefly at the large end, and smaller detached spots of the same color at the small end; they are one inch in length, six-eighths of an inch in diameter.

During the time of incubation the male presents an example of the most devoted attachment to his mate, rarely, if ever, shown by any of the feathered race. While the female is performing her duty of hatching her eggs, he sits near the nest, on a projecting branch of the same tree, and with valor defends her and the nest from all harm; while at the same time, his restless eye selects for her the choicest food. He also assists in hatching the eggs, and appears to perform the duty with cheerfulness.

In the fore part of the day the female leaves the nest, and alights on the nearest stand in the field, and sits pluming her feathers for some time, interrupted at times by insects which she allows to pass, by merely following them with her eye. After having arranged her feathers, she is ready to take her prey the first opportunity that presents itself. In a few moments she launches in the air and keeps upon the wing, making a wide circuit around the field, and sometimes beyond it, before she alights; this circuit she makes several times, and remains one, and sometimes two hours from the nest; when she returns the male, with incessant twitterings, betakes himself to the most prominent part of the field to pass the remainder of the day in strife with other birds.

After the young are reared they separate, and you hear them no more during their stay at the North; they are seen, however, watching for insects from stone walls, posts, or fences, until about the first of September, when they depart for the South.

With regard to the house-wren, (*Troglodytes Adon*): This favorite and well-known bird arrives in Massachusetts about the tenth of May, and immediately commences looking up a place for its nest; they will select some cavity in an old apple tree, or occupy a box put upon a pole, or tied on a tree in the garden. A jug with a hole through its side large enough for their entrance, with its neck corked tightly, is generally accepted by them in preference to anything else. When any one takes sufficient care to provide such a place for them to breed in as their habits require, he will be likely to have a pair of these birds about his premises, whose loud and animated song is exceedingly pleasing, and whose usefulness in destroying insects which prey upon fruit and vegetables, would be a recompense.

It cannot be too strongly urged upon farmers and horticulturists to provide for the wants of useful birds; the immense number of insects destroyed by them daily, for their own wants, and those of their young, greatly reduces the ravages of these

vermin. In the month of May I tied to the upright limb of an apple tree, a jug which I had fixed for their accommodation; also a box, which I placed upon the ridge-pole of a shed; in a few days I heard the merry song of a male as he sat upon the top of the box, and for two days he sang almost incessantly; at times he would fly to the jug and curiously examine it, then return to the box—constantly in motion when not in song. On the morning of the third day a female arrived—shy and coy, and as she became more familiar, he became more vivacious; it seemed as though his little bosom would burst with ecstasy of joy, as he led her to and from each place that had been erected for their use.

The next two days seemed to be spent by them in viewing the orchard and premises generally, particularly the pig-stye, barn and bee-house; the latter building being a place of resort for them through the summer at twilight, at which time they destroyed numbers of bee-moths. On the fourth day the female commenced carrying small dried sticks into the jug, and continued with this work until she had filled it nearly full, placing them on the top in a circular form, leaving a cavity, in which she made the nest of fine dried grass, and lined it lavishly with feathers.

It is invariably their custom to nearly fill the cavity they have selected with sticks before they build their nest, unless such a cavity is very large; and in every instance, I have noticed that the top of the nest was above the place of their entrance.

Danversport.

A. F.

PROFUSION OF LIFE IN THE OCEAN.

Not a shell or a stone is brought up, but is thronged with living beings. Every branch of weeds gives shelter to multitudes of creatures—some temporary lodgers, some permanent residents. Life is a parasitic upon life. The *surpula* builds its stony case on the abode of the shell-fish, and the delicate lace-work of the moss-coral overspreads the *surpula*. Over the stem of the seaweed creeps the graceful plumes of the zoophyte spring. These, again, are thickly invested by the pretty cells of many smaller species; and they in turn, minute as they are, often bear in profusion the curious forms of microscopic animaculæ. Let us take a stone from the heap that is lying in our boat. It is a perfect museum in itself. It is richly colored in parts by the nullipore—one of the lowest forms of vegetable life, which does for the scenery of the ocean, what the moss and the lichen do for the scenery of the upper world. Here is a circular cluster of cells, "looking like beautiful lacework, carved in ivory;" here a little saucer, of the purest whiteness, containing within a number of stony-tubes, the habitation of a whole company of tiny polypæa. A sponge overgrows one portion of the stone, itself the home of many a living thing; a sea anemone has possession of another. The little encrinite is present, and near it a small star fish. There are worms, too, in plenty; and more of life and beauty than we have space to describe. It is pleasant to think of the happy existence a single stone may support.

The forms to which we have chiefly referred are visible to the unassisted eye; but, as Humboldt remarks, "the application of the microscope increases in the most striking manner, our impres-

sions of the rich luxuriance of animal life in the ocean, and reveals to the astonished senses the consciousness of the universality of being."

MIGRATION OF PLANTS.

Botanists have long been convinced that the facts connected with the diffusion of plants may often be explained by an inquiry into the structure of their seeds, the lightness of these, and their capability of transportation by winds; by their texture preserving them from destruction in the waters of the ocean; by the prevalence of particular currents in the air or sea; or by the presence or absence of mountainous barriers, or other obstacles to their dispersion. It had been observed that (the God of) nature has provided a variety of methods for the diffusion of seeds. Many such have been noticed by naturalists, and their operations have been illustrated by facts well ascertained. The most important are doubtless winds, or rivers, or marine currents. The former convey the lighter kinds of seeds to an incalculable distance, and the latter are well known to transport others occasionally from the most remote countries. Besides these more general causes, it is well known that seeds are often conveyed from foreign countries, which were transported in commerce. Various plants are well known to have been introduced into Europe by the accidental mixture of their seeds with rice brought from the East or West Indies, and those tropical countries have interchanged some of their productions in a similar way. Some seeds are capable of preserving their vitality in the stomach of birds, and are thus propagated. Such are the mistletoe and juniper. A number of facts are upon record, which prove that the migration of plants by means of currents in the ocean to distant shores, where, if the climate is congenial to them, they form new colonies, is not a matter of conjecture, but a thing which actually takes place. Several remarkable instances of this description are recorded in the *Amanæitates Academicæ*. It is stated that the seeds of several plants of equinoctial countries are occasionally collected in the Hebrides.—*Pritchard's Physical History of Mankind*.

OUR SUMMER BIRDS.—The attention of the reader is called to a highly interesting article on one of our summer birds, the *Tyrant, Fly-Catcher*, or *King Bird*, well known to all who visit the fields in the summer. It is written by AUGUSTUS FOWLER, Esq., of Danvers, Mass., a brother of S. P. FOWLER, whose articles in our columns on "*The Birds of New England*," have won for him an enviable reputation. Both of these gentlemen are deeply imbued with a sense of the beautiful in nature, and have a high appreciation of the charms of rural life,—and thus their writings touch a chord in every human heart. We welcome "A. F." to our columns, and feel confident that the reader will welcome him too.

VIRGINIA FARMER.—Harrisonburg, Rockingham Co., Va. By WM. G. STEVENS.—Filled with valuable reading. We are glad to see agricultural papers taking root in the Southern States.

CULTURE OF THE GRAPE.

In a recent number of the *Farmer*, we had an illustrated article upon the Grape, and then spoke of it as an ornament in the garden or about the dwelling, of its healthfulness as an article of food, and of its usefulness in sickness. That article has been very favorably received, and a desire expressed by many to see another giving more full and explicit directions for *pruning* and *training*, from the time the root or cutting is set until the vine has covered all the space which it is desirable to have it occupy.

In Wilson's Economy of the Kitchen Garden, we find succinct and clear directions for the management of the vine, which we give below, with such illustrations as cannot fail to make the whole matter clear to those entirely inexperienced.



No. 1.

No. 2.

No. 3.

No. 1.—Plant when set out.

No. 2.—Plant one year after setting out.

No. 3.—Plant two years after setting out.

No. 1 on the plate is a representation of the plant when set out, of one year's growth from the cutting, and is to be cut off to one good bud, as shown by the cross lines. The lower bud is seldom counted, and only the upper bud is to be allowed to produce one shoot; the young buds on this shoot will many of them shoot out in the course of the summer, which should be pinched off.

No. 2 represents the plant of one shoot, one year after being planted, and is to be cut down to two good buds, about fifteen or eighteen inches high from the ground. The shoots from these two buds are to be trained to a trellis, horizontally, to a distance of four feet, and then their ends pinched off, as we intend the plant to fill a space in width of eight feet.

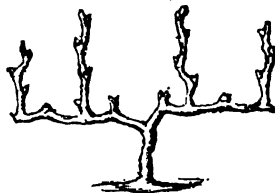
No. 3 represents the plant two years after setting out, with the last year's horizontal shoots as they must be cut in to three good buds. The two buds next to the stem, are to be allowed to shoot and grow upward as high as they please, to be tied up to the trellis, and the end buds to be trained horizontally, to the limits of three or four feet distance, and again pinched off.



No. 4.—Vine three years after setting out.

No. 4 represents the plant three years from setting out, with its two last year's upright shoots, as

they must be cut down to four good buds, which are this year to bear fruit, and the horizontal cut in to three good buds; their shoots are all to be trained upright, which will complete the head of your vine, with eight branches at about one foot apart.

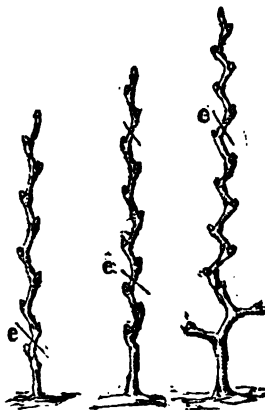


No. 5.—Vine four years after setting out

No. 5 represents the vine four years after setting out, with the two centre branches that bore fruit last year, as they must be cut down near to their origin. The next two cut down to four buds for bearing fruit. The next two to one good bud, for producing one good wood shoot. The next and last two, to three buds for bearing fruit. Its regular culture, afterwards, is to cut four of the branches low down, and to leave four longer to bear fruit alternately, always allowing the branches that bear fruit the one year, to be cut down, for recovering a good shoot again for bearing the next.

The other mode of training, is called horizontal training, but may be extended to any height or distance, so as you retain the leading shoot, or it may be confined to a very low space by cutting it off.

No. 6 represents the plant when set out, the same age as the other; to be cut also to one good bud, as at *e*. This bud to be allowed to produce one good shoot.



No. 6.

No. 7.

No. 8.

No. 6.—Vine when set out.

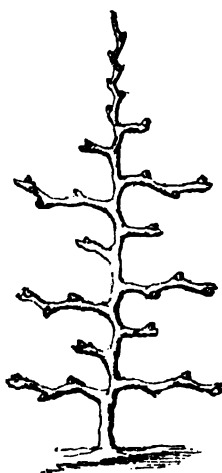
No. 7.—Vine one year after setting out.

No. 8.—Vine two years after setting out.

No. 7 represents the plant one year after setting out, to be cut down to three good buds as at *e*. The shoot from the upper one of which is to be trained upright, and the two lower ones to be trained horizontally.

No. 8 represents the plant two years from setting out, the leading shoot of which is to be cut down to nine buds, as at *e*. The upper bud to be allowed to shoot upright, and all the others horizontally; four feet from each side. The two last

year's horizontal, cut as they must be to one good bud, its shoots to be trained as it was last year.

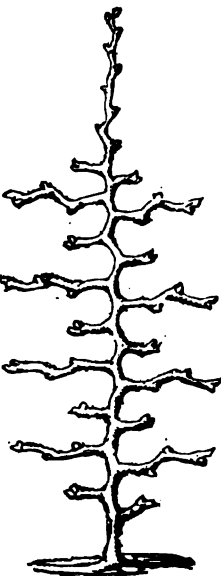


No. 9.—Vine three years after setting out.

No. 9 represents the plant three years after setting out, with its branches cut as they must be. The two lower ones to three good buds for bearing fruit. The next two cut to one good bud for wood. The next two, to three for fruit. The next two, to one. The other two to three, and the leading one again to nine. The upper shoot to have its shoots continue upright—the other eight horizontally.

No. 10 represents the plant four years from setting out, with its branches cut as they must be. The lower two, to one good bud; the second two, to three buds; the third two to one; the fourth two to three; the fifth two to one; the sixth two to three; the seventh two to one; the eighth two to three; the ninth two to one, and the leading shoot to nine buds, all to be managed in the same way as last year. And in this way you may continue your plant as far as there is room; when that is terminated, cut off your leading shoot, and regulate all the horizontal branches so that they may bear fruit and wood alternately to the end of the grape vine's existence.

It may be necessary to observe, that in the first mode described for training the vine, the two horizontal branches or arms, to support the upright shoots, are intended to extend four feet from each side of the main stem, and on each of them are to be selected four upright branches which will make them about a foot apart. It will be necessary to rub off any intermediate buds, so as to regulate them, to be placed at proportionate distances. And after they are once cut down to one bud, the next year's cutting down would be a joint higher, and this may be allowed for a year or two; but whenever they get too far above the arms, by cutting down to the lowermost new bud, they must be cut down on the old wood near to their origin, and only one good shoot allowed to grow; any other bud to be rubbed off. And the same rule must be observed in cutting all those trained on a horizontal plan. In directing vine buds to be left



No. 10.—Vine four years after setting out.

on the leading shoot, it is only intended case in the plant be very strong and vigorous; should it not be so, it would be better to cut it to five, or even to three buds; in which case there would be only one or two branches on each side instead of four, as exhibited in the plate; and the choice of numbers should always be regulated by the strength and condition of the vine.

But the grape may be produced in large quantities, and of fine quality, without the exact pruning detailed above. Plant and tend it as you would any thing else that you wish to make flourish rapidly, and after it has covered as much space as you care to have it, prune it, so as to leave the branches free and clear of each other, and so as to admit freely the sun and air. In this manner the plant will not have so full a supply of roots, as under the system of close pruning, but with proper feeding, will flourish and produce abundantly. There is no necessity, therefore, of any person neglecting to set grape roots, because he does not fully understand the principles of after-culture.

ON WINTERING DOMESTIC ANIMALS.

There is no great amount of labor to be done out of doors in this climate, during December. The most important labor of the farmer now, is the care of his domestic animals, to see that they be well sheltered from cold and wet, and properly fed and watered. The year's profit or loss, of the farmer, depends greatly upon the manner in which he winters his stock. The milk of the ensuing season, the wool, and the ability for labor, all depend, in a great measure, upon the care the farmer gives his cattle, sheep and horses, during the winter. The *Cultivator*, some years since, most truly said—

"If there is one truth respecting animals more deserving of remembrance than another, it is that the animal, entering the winter months in high condition, is already half wintered—that is, the care and food required to bring him out well and hearty in the spring will not be one-half as much as will be required by the one that commences the winter spring-poor. A fat strong animal, will be warm and comfortable where a poor weak one can hardly live, and the hearty vigorous one will digest and assimilate food which the weak one would scarcely taste."

Regular hours for attending to all matters is important, but in no department of the farmer's business is it more important than in milking cows, foddering or feeding, watering and carding stock.

Cattle should be fed often, and but little at a time,—say four times in the twenty-four hours, will keep cattle in better condition and at less expense than to feed but twice a day, being careful never to give them so much at a time that they will leave their feed before it is all consumed.

Cattle thrive better when their dormitories are kept clean and freely littered with dry leaves or straw, being mindful not to forget the frequent use of the card and currycomb. Cattle, horses and sheep, should have salt where they can have access to it whenever they desire it. A gentleman informed me that some years since he lost many horses annually, but since he commenced to salt his

horses three times a week, or feeding on salt hay, he has lost none.

Sprinkling hay with salt dissolved in water, or salting hay too freely, is injurious, as over salting diminishes the nutriment, and weakens and keeps the animal too loose; but when they have free access to use or not, they are not apt to take more than nature requires.

Cutting provender, corn stalks, straw or coarse hay, is a great saving. When cut, it is all eaten; there is no loss of material. A good milch cow will tell her milker a good story when well supplied with chopped corn stalks, or rye, or oat straw, wet and well powdered with corn ground with the cob or wheat, shorts, or buckwheat bran, and a little powdered oil cake. My cows increased their milk and flesh, and my sheep improved last winter, by Col. JAQUE's mixture, which was two bushels of turnips cut fine, one bushel wheat bran, half a bushel powdered oil cake, with seven bushels cut hay, wet with ten gallons water—the mixture well stirred and intermixed, giving them as much as they would eat of it thrice a day, and once a day a feed of good English hay, with a tub of soft clean water to which they had access as often as they chose.—*Country Gentleman*.

THE HORSE INFLUENZA.

We hardly need recommend the following article, from Dr. DADD, to the close attention of our readers. It is the result of thorough knowledge and long experience, and its suggestions will be found of great value. We especially hope that the closing paragraph will not be forgotten, but that all who can exert any influence, will use it for the encouragement and extension of Veterinary Science.

EDITORS OF NEW ENGLAND FARMER:—*Gentlemen*—Your note requesting me to answer the inquiries of one of your subscribers, who seems anxious to elicit information regarding the treatment of the prevailing *horse influenza*, came to hand. In reply, permit me to remark, that it would be a matter of impossibility for me to give the *proper* treatment of a disease, which, in both attack and progress, assumes such a variety of forms. In some cases the most consummate skill has been baffled. I am informed that in the State of New York, the disease has assumed a most malignant type, and the subjects die in the course of a few hours, notwithstanding the efforts of the most experienced surgeons.

During the past week several fatal cases have occurred in this vicinity; the cold snap of last week operated very unfavorably on horses then suffering under the primary stage of the above malady, and should the weather continue cold, I fear we shall have to record a greater per centum of deaths than heretofore.

I have said that the disease assumes a variety of forms, hence no special treatment can be adopted; variations in the *symptoms* indicate the same as regards *treatment*; and what might be good medicine at one stage, would be injurious at another.

Some general ideas of the treatment, however, may be gleaned from the following:—

The disease is very prostrating, and as it progresses, the heart, lungs and brain become congested and embarrassed. The blood accumulates carbon; the heart fails to propel, and the lungs to vitalize the same. This state demands stimulants of a character that shall excite vital action, and tend to effect chemical changes in the blood; the most valuable agent in this view is carbonate of ammonia. In veterinary practice this agent is considered as one of the most valuable diffusible stimulants; it acts first on the nerves of the stomach, and through them excites the whole nervous system; it may be given in doses of from one to three drachms, either in the form of bolus, or drench. Its stimulating influence, over the heart and nervous system, may be increased by the addition of one or more drachms of good Jamaica ginger. This treatment may be continued until congestion subsides, which may be known by the fullness of pulse, and heat of the external surface of the body, and by other symptoms which usually attend fever in its inflammatory stage.

The exciting, or stimulating plan of treatment must never be entirely abandoned; to husband the powers of the system, and thus guard against subsequent prostration, must be our chief object; although the case may require a sedative to-day, (in the form of camphor and white hellebore,) tomorrow the symptoms may again indicate excitants, and thus the treatment must necessarily vary.

Excitants, or counter-excitants, are also, at times, needed externally; if the patient has a deep seated cough, strong liniment, composed of oil, harts-horn and turpentine, (and sometimes camphor,) must be applied. Often I anoint the parts with a thick paste, composed of mustard and vinegar. The membranes of the *fauces*—throat—are excessively sore, then the same course has to be pursued, at the same time a mucilaginous drink, composed of flaxseed, sweetened with honey, must be allowed. The nervous system must also be aroused by the application of the above liniment to the spinal column.

At another stage of the malady, *diaphoresis* must be excited by clothing the body with flannel, and drenching with a preparation known as solution of *acetate of ammonia*, to the amount of six or eight ounces per day, until the skin feels soft and warm.

In case *oedema*—local dropsy—of the body or extremities sets in, the patient then requires *diuretics*; one or two ounces of sweet spirits of nitre may be given in linseed tea, until the kidneys respond, and the secretion of urine becomes augmented. The bowels are sometimes inactive, the *feces* are clothed with mucus, and have a fetid odor. I then prescribe:—

Linseed oil..... } Equal parts.
 Lime-water..... }
 Dose—Eight ounces.

Occasionally the animal becomes uneasy, paws with his fore feet, the pulse is somewhat wirey, and beats at the rate of fifty, and over, per minute. I then give camphoreted tincture of opium, one ounce, and repeat the dose if necessary. This state is one of great danger because it indicates active congestion of the bowels, which may result in mortification of the same. In order to ward off the last stage, I depend chiefly on stimulants, sedatives and tonics. The best tonics are powdered *gentian*, *golden-seal*, *quill-bark*; either of which may be advantageously given, as they possess very little, if any, astringency.

Prescription for a tonic ball:—

Either of the above tonics, powdered.....3 drachms.
 Ginger.....1 drachm.

Rub them together in a mortar, then add a tea-spoonful of molasses, and a small piece of brown soap, and form a bolus.

Among all the cases that have come under my care and observation, I have neither found it advisable nor necessary to practice the *anti-phlogistic* treatment, in so far as it relates to bleeding and purging; and I cannot conceive a case (so depressing as influenza is known to be,) that would require any such heroic treatment; the safety of our patient depends on the judicious application of remedies such as are here named; and, therefore, I would warn the farmers against the use of *fleam* and *cathartic* in the treatment of the prevailing influenza. Yet, after all, the very best treatment may fail in restoring a patient. We require aid in the form of pure air, suitable diet and good nursing; failing in the latter important adjuncts, our treatment avails but little.

The reader will probably perceive that the above disease, like many others to which domestic animals are subject, requires professional skill, consequently the farmers should use their means and influence for the purpose of having a properly qualified veterinary surgeon in their several localities. We are now in possession of the long needed facilities for imparting a thorough course of instruction to all who knock at the door of veterinary science. We have an incorporated institution in this city, and are in possession of men and facilities to impart to the aspirant for veterinary honors, as practical an education as can be obtained elsewhere.

G. H. D.

MILK PAINT.—A paint has been used on the continent of Europe, with success, made from milk and lime, and dries quicker than paint, and has no smell. It is thus made. Take fresh curds, and bruise the lumps on a grinding stone, or in an earthen pan or mortar, to make it just thick enough to be kneaded. Stir this mixture without adding more water, and a white colored fluid will soon be

obtained, which will serve as a paint. It may be laid on with a brush with as much ease as varnish, and it dries very speedily. It must, however, be used the same day it is made, for if kept till next day it will be too thick; consequently no more must be made at one time than can be laid on in a day. Any color, red or yellow ochre, may be mixed with it in any proportion. Prussian blue is changed by the lime. Two coats of this paint is sufficient, and when dry, it may be polished with a piece of woollen cloth, or similar substance, and it will become bright as varnish. It is only for inside work; but it will last very long if varnished over with the white of an egg after it has been polished.

EXTRACTS AND REPLIES.

WHOLESOME IMPRESSIONS OF RURAL LIFE.

The reader cannot fail to see, in the following, the beautiful and healthful impressions made upon the mind by an early and intimate acquaintance with rural life. They are a fountain from which gush up perpetual pleasures, as the well-spring sends up its cool, clear and sparkling water, and thus have a decided influence, little as we may think of them, upon the character and happiness of life. See how delightfully they nestle in the bosoms of men immersed in the business and cares of life:—

One of us was out, yesterday, at the old homestead, in West Brookfield, Worcester county, where our childhood was passed, and very vividly came up the recollections of the days, when we boys of ten to fourteen years, rode horse to plow, spread the swath after the mower, and

"Jocund drove the team a-field,"

and sometimes, even at an early age, our heads hardly higher than the plow-handle, yet guided that kingly instrument along its furrowed track. The Depot now stands upon the exact spot where we once raked after the cart, or at ten o'clock, under the shade of a spreading oak, partook of the luncheon of bread and cheese, with a relish of appetite never since equalled. The music of our repeat was the "spink, spank, spink," of the chattering bob-o-link, balancing himself upon some tall field lily, or stout stem in the meadow. It all comes back:

"Then summer heats refulgent come—
 The air is filled with insect hum;
 With skilful arm, but strong and lithe,
 The sun-browned farmer swings his scythe;
 His fervid rays old Sol down pours,
 Which promise give of garnered stores,
 Which shall dispel of want the fear,
 When winter rules the "inverted year."

Blest be the farmer! Honored his occupation! The voice of health and rejoicing is in his habitation! Sweet are his slumbers—refreshed his awakening. He communeth with nature, and is taught from her ever-instructive volume.

"Ill fares the land to threatening ills a prey,
 Where wealth accumulates, and men decay;
 But a bold yeomanry, their country's pride,
 When once destroyed can never be supplied."

We are a sort of amateur farmers now, finding relaxation from turbulent business cares in the cultivation of a few acres, and our hearts go out to all engaged in this honored vocation. Success to your labors to aid their toils. G. & C. MERRIAM.

Springfield, 1866.

ICE HOUSES.

MR. BROWN:—I want your knowledge, or opinion in regard to an improvement I desire to make to my ice house. It is built entirely above ground, 12½ feet in the clear, and 12 feet high, with posts set in the ground, sided up with 1½ inch prime plank, and enclosed by another house or shell, 16½ feet in the clear, same height and same material,—leaving a space 2 feet between the two,—which is filled with tan bark. The ground on which it stands is slightly elevated, and with an additional 6 inches of tan bark, then the ice (last winter 4 inches thick) is put in, a layer at a time, till the house is full.

Now what I want to know, without the expense of the experiment, is whether the ice will keep better by making the bottom like the sides and suspending the bottom with sleepers, say 6 or 8 inches above the surface of the ground?

The ice house is protected by another house 32 by 30 feet, posts 12½ feet high, planked up with 1½ inch pine boards set on end. The spaces between the ice house and the outside protection serve as wood-house and carriage-house, so the room is all used, and the ice house thoroughly protected from the sun. The ice held out till the last of September, and we used it without stint or measure in the family, and supplied the neighborhood in sickness, and used it as a milk-room in hot weather, covering the warm milk-pans in the ice. The waste water from the ice flowed at times quite freely. Next summer I want to make it supply a milk-room before it loses its icy nature.

Locust Lawn, New Albany, Ind.

REMARKS.—Raise your ice-house 12 to 15 inches above the surface of the ground, and let the wind have free passage under it, not being obstructed by your outside building. The floor should be tight, though it is not absolutely necessary to have it double and lined with tan, as the cold air will constantly find its way to the bottom. The keeping of ice well depends in a great measure upon having it in large quantities and compactly stowed. We propose to give a more extended article on ice and ice-houses at a future time.

APPLE ORCHARDS.

MR. UNDERWOOD, of Lexington, in reply to our question, why he prefers southern slopes for apple orchards, says:—"My reasons are these: that with such a location the trees will be protected by the rising ground on the north and northeast, and from the winds and storms that prevail from that quarter. The frost will also be out of the ground earlier in the season, and of course the trees will sooner get the benefit of the opening spring." He also informs us that he has not taken the premiums for orcharding which we supposed he had.

APPLES FOR COWS.

MR. EDITOR:—I live in a county where in times past apples fed to cows were said to dry up their milk. I think that may have been the case when fed in large quantities. I have been feeding a cow some four or five quarts a day, regularly, and nev-

er had one give so much or so rich milk before. As apples will not generally keep through the winter in cellars, they may be spread on the barn floor and frozen, then piled up and covered with hay or straw, where they will keep, and may be used as wanted by pouring water upon them.

West Windsor, Vt., 1855.

A SUBSCRIBER.

CLAY WATER—COAL ASHES.

MR. EDITOR:—What will settle a newly dug well, where the bottom of the well is of a clayey nature? I have dug one this fall—the water is beautiful to the taste, but will not settle and appear clear.

Will you inform me whether coal ashes are good for anything as a manure? By answering the above, you will confer a great favor on a constant reader of your valuable paper.

J. F. R.

Hopkinton, Dec. 7, 1855.

REMARKS.—There are no means in our knowledge, whereby to "settle," or make clear, the water in your well, that is, while it is there. Nor do we believe that it contains any substance injurious to health. If you prefer to have it appear perfectly clear, place in a keg or cask of any kind whatever, a layer of pebbles, then sand, then fine charcoal, then sand, again, each layer being three inches in depth, upon this and turn the water and let it pass through and draw it off at the bottom. The water in your well will, probably, always, retain its present appearance; that is, if it has merely a whitish appearance and no sediment is visible to the naked eye. But if particles are visible, then by-and-bye, they will probably subside, and the water become much clearer.

Coal ashes are good manure, and ought to be preserved.

HOW TO USE LIQUID MANURE.

GENTLEMEN:—In all works on Agriculture, liquid manure is strongly recommended, but in no one do I find directions for its use which are satisfactory. Can you inform me through your valuable paper, the necessary strength of the liquid? What proportions of either of the following articles are to be used in 100 gallons of water, and the times of its application to grass lands?—either guano, superphosphate of lime, soot, night-soil, urine, or liquid from manure heaps. (a.)

If used of too great strength, it would only burn up the grass, and if too weak, would be of little advantage. (b.)

I have engaged about 200 bushels of soot, from a person who has cleaned chimneys where wood is burnt, and also 200 bushels of soot, taken from the flues of boilers where anthracite coal is used. To what crops would they be of the greatest benefit, and what is the mode of applying it.

Salem, 1855.

A SUBSCRIBER.

REMARKS.—(a.) It should not be used strong, for more reasons than the above named.

(b.) There is no danger of diluting it too much, provided the ground be thorough-drained, or have naturally a subsoil sufficiently porous to allow the water to pass off freely. In this case, (and liquid

manure should be used in no other,) there is no limit to the amount of water in which manures may be dissolved, except that of economy. Use therefore as much water as you can afford to carry into the field. More on this subject in our next; something also, on the subject of irrigation, which is closely connected with it—almost the same thing; and on the composition and uses of soot.

RAISING WHEAT.

FRIEND BROWN:—"Some things can be done as well as others," were the words of Sam Patch as he leaped the falls for the last time. That wheat can be raised in New England is an incontrovertible fact. The high prices of flour the past season, induced many farmers that never sowed wheat before, to try it last spring, and the result in this vicinity, or as far as my observation extends, is that it is the most profitable crop raised.

Last spring I obtained $1\frac{1}{2}$ bushels of coffee or Java wheat, (which bears its name from the seed being taken out of some Java coffee,) which I sowed on one acre of ground, and harvested from it 29 bushels, which weighed 61 lbs. to the bushel. This wheat is bearded and covered with white husks, which drop off very easy and the grain shells out easy. The flour from it is large in quantity, it being thin-skinned wheat, and not only equal, but better than the best Genesee flour. J. D. WARD.

North Ashburnham, Dec. 17, 1855.

PLANS FOR BARN.

MR. EDITOR:—Presuming you would be willing to enlighten a subscriber on any subject connected with agriculture, I take the liberty of asking you to send me, or publish, the best ground plot for a barn about forty-five by fifty feet; the best mode of weatherboarding, &c. R. HAINES PASSMORE.

West Chester, Pa., 1855.

REMARKS.—We contemplate presenting some outlines of barns by-and-by. In the mean time perhaps some of our correspondents may suggest some plan that will be favorably received.

GRAPE SEEDS.

MR. EDITOR:—Please inform me through your paper what is the best time to plant grape seed?

Yankee Settlement, Iowa.

L. H.

REMARKS.—Grape seeds may be sown either in the fall or the spring, but as in keeping them through the winter they may become too damp or too dry, as the place may be where they are kept, perhaps it is better to sow them in the autumn, and in such a manner as to resemble the condition they would be in if falling from a spur in a vineyard; that is, among decaying leaves and twigs, and in a light, rich mould. Small seeds are apt to be covered too deeply. So deep as to be in a suitable condition to keep for ages, or too deep to germinate, and not deep enough to preserve them, and thus they become moist, are slightly quickened by the solar rays, but cannot push out a germ sufficiently vigorous to reach the surface, and consequently perish.

SPROUTED WHEAT.

I wish you, or some of your correspondents acquainted with experimental or practical farming, would inform me through the *N. E. Farmer*, whether it would be safe to depend upon grown wheat for seed, as I am calculating to sow some next spring, and have a few bushels not quite as good for bread as that not grown. An answer to the above, from a source to be depended on, would be gladly received by me, and perhaps be a benefit to others. W. BUGBEE.

Orfordville, N. H., 1855.

REMARKS.—If we had a field to sow, we would not run the risk of sowing seed that had sprouted, or "grown," as it is called. A gentleman at our elbow says he has tried it, but that it has always failed to grow. Our correspondent will accept thanks for his hearty words of commendation of the *Farmer*.

AN APPLE TREE.

I have an apple tree that was nine years old last spring, that has borne for five years. On the 8th day of Oct. I gathered three bushels of apples from the same tree, and since have measured it; the height is nineteen feet and eight inches; four inches above the ground, it is two feet in circumference, and five feet from the ground it is one foot and five inches. It is natural fruit, and similar to the Baldwin apple. It has grown without any extra care or trouble. SAMUEL W. BLODGETT.

Acworth, N. H., 1855.

POWDER MILL WASTE.

MR. EDITOR:—We have a powder-mill in our place, where a number of barrels of stuff from the saltpetre refinery is taken off. What I wish to know is, what it is worth, if anything, for manure, and how applied? If you, or some of your correspondents, will inform me through your valuable paper, you will oblige a subscriber. J. H. A.

Fair Haven, 1855.

For the *New England Farmer*.

DO POTATOES MIX?

MR. EDITOR:—As much has been said in your interesting and very valuable paper, during the last few months, about potatoes—concerning the relative value of large potatoes, small potatoes and cut potatoes for seed, &c.,—I feel a desire to extend the potato inquiry a little further. I find the opinion quite prevalent among farmers—or at least among men laboring on farms—that different kinds of potatoes planted together will intermix; one kind become changed, or at least, partially changed to another. I have ever supposed the opinion was erroneous, and if I am in mistake, I wish to be corrected. If such a thing takes place, how is it effected? Is it done by seeding, that is, growing balls, or by some other way? In this region, we have but few varieties of potatoes that ever produce balls.

Enosburg Falls, Vt., 1855. A PIXLEY.

THE CAROLINA CULTIVATOR.—The services of Prof. B. S. HEDRICK Professor of Agricultural Chemistry in the University of North Carolina, have been secured as Editor of this paper.

For the New England Farmer.

PORTRAITS

FROM THE FIELD AND FARM YARD.

BY WILSON FLAGG.

THE CROW.

The crow is one of the most remarkable and well known of all our winter birds. Every one is familiar with his black plumage, his peculiar manners and his croaking voice. Unfortunately, he is regarded with an evil eye, and there is no other bird that suffers such general persecution. In no kingdom or province is he protected either by custom or superstition, and there is no peace for him in any part of the earth where man resides. Remembering the mischief he does by plundering a few grains of corn in the sowing season, and forgetting the benefits he confers by the destruction of myriads of noxious insects, the farmer looks upon him as the enemy of his crops, and destroys his species by every means which he can invent; as an excuse for this atrocity he is accused of all sorts of unamiable and wicked propensities. He is abused for his cunning, his stealth, his mischievousness and his habits of thieving. But his stealings might justly be regarded as the perquisites attached to his office as scavenger and destroyer of vermin. His cunning is the natural result of the machinations made against him on all sides, and the traps that are constantly set for his destruction.

His wariness is really a virtue; because under the circumstances in which he is placed, it is one of his principal means of self-preservation; and I am persuaded that the persecutions to which he has always been subjected have caused the development of an amount of intelligence that elevates him many degrees above the majority of the feathered race. Let one be born with no more sagacity than a common hen or turkey, and he would not escape the snares of his enemies a week after he had left the maternal nest. There are few birds more interesting from their manifestations of intelligence. He observes many things that seem to require reason in the observer. He knows at once from the deportment of the person whom he sees, whether he is prepared to do him an injury, and takes but little notice of one who is strolling the fields in search of flowers, or for recreation. Such a person may approach so near him as to observe his manners, and even to note the varying shades of his plumage. Neither does he seem to regard the presence of a party in a chaise or on horseback; but if you have a gun in your hand, you can hardly get sight of one for the whole day.

The crow is by no means destitute of beauty. His coat of glossy black, with violet reflections; his hazel eyes and intelligent look; his stately and graceful gait, and his steady and equable flight, notwithstanding his want of brilliant colors, combine to yield him a handsome and dignified appearance. The crow, and his congener, the raven, have always been celebrated for their gravity—an appearance which seems to be the result of his black sacerdotal dress and certain exhibitions of intelligence in his ways and general demeanor. Any one who should watch his motions for the space of five minutes, either when he is stalking alone in the field, or when he is careering with his fellows around some tall tree in the forest, must be satisfied that he deserves to be called a grave bird. His voice has nothing to recommend it; it is harsh and

unmelodious. But Æsop mistook the character of the crow when he represented him as the dupe of the fox, who gained the bit of cheese he carried in his mouth, by inducing him to sing and exhibit his musical powers. Vanity is evidently no part of his character.

The expedients used for the destruction of the crow in all parts of the world are cruel and shameful. The laws of every nation have set a price upon his head. He is hunted with the gun; he is caught in crow-nets; he is hoodwinked with bits of paper smeared with birdlime, in which he is caught by means of a bait; he is poisoned with grain steeped in hellebore and strychnine; the reeds in which he roosts are treacherously set on fire; he is pinioned by his wings on his back, and made to grapple his sympathizing companions who come to his rescue; and children after receiving lessons of humanity, are taught to regard the crow as an unworthy subject, when carrying those precepts into practice. Under every government he is made an outlaw by legislation, and is everywhere held up for public execration.

As an apology for all this inhumanity, are enumerated a variety of misdemeanors of which he is guilty. He pillages the cornfield both in the spring when it is planted, and in the autumn when it is gathered; he destroys the eggs of innocent birds whom we would like to preserve; he purloins fruit from the garden, and carries off young ducks and chickens from the farm-yard. But to make amends for these overt acts, he confers upon man some special benefits. Omnivorous in his habits, he destroys in the course of the year, vast myriads of grubs, worms and noxious vermin; he clears the land of offensive masses of decaying fish and flesh; he hunts the grassfields and pulls out and devours the cutworms wherever he perceives the evidence of their operations; he destroys mice, lizards, young rats, and the smaller serpents; lastly, he is a kind of sentinel about the farm, and drives the hawk from its enclosures.

After weighing the services he performs for man against the mischief he occasions, I cannot think he deserves death. It is during seed-time and harvest that his depredations are chiefly committed; and so highly are his services appreciated by those who have written of birds, that there is hardly an ornithologist who does not plead in his behalf. Audubon remarks, "I can well assure the farmer that were it not for his race, thousands of cornstalks would every year fall prostrate, in consequence of being cut down close to the ground by the destructive grubs which are called *cutworms*." Waterton says, "he does but very little injury to man during nine or ten months of the year,"—"and for my own part, I should lament his final absence from our meadows and our woods." Wilson, and many others, also plead for him, and would save his species from extermination.

But the crow, independently of the services rendered by him as a scavenger and a destroyer of vermin, may be esteemed for certain qualities which are agreeably associated with the charms of nature. It is not the singing birds alone that contribute by their voices to gladden the husbandman and cheer the solitary traveller. The crowing of the cock at break of day, is as joyful a sound, though not so musical, as the voice of the robin, who, in his season, chants his lays at the same early hour. The cawing of the crow is to me one of the most cheerful

of sounds, and is heard long before the majority of birds have left their perch. If not one of the melodies of morn, it is one of the most notable sounds that herald its approach. And how intimately is the voice of this bird associated with the sunshine of pleasant winter days; with our woodland excursions during this inclement season; with the stroke of the woodman's axe; with open doors during warm winter days, when the eaves are dripping with the melting snow, and with all those cheerful voices that enliven the groves during the period when every object is valuable that relieves the silence or softens the dreary aspect of nature.

For the New England Farmer.

HOW TO RAISE COLTS.

DEAR SIR:—I am often asked the best mode of feeding colts the first and second winter after taking them from the mare, and not having had much experience in the raising of colts, could not give the necessary information.

I would therefore like, through the columns of the *Farmer*, to receive the answers to the following questions, for my satisfaction, and for the information of others.

Is it well to give colts oats, or any other provender, the first or second winter after taking them from the mare?—or are they better to be kept upon carrots and other roots?

Is it best to take them from the mare before they are brought to the barn for winter, or to wean them on hay?

How long should a colt remain with the mare before it is weaned?—or in other words,—how old should it be?

Would it be of service to the colt to remain with the mare all winter, if it could be done conveniently?

Would it injure the mare if she could be kept in good flesh and spirits?

Answers to the above, as soon as possible, would be desirable.

A SUBSCRIBER.

REMARKS.—There are five hundred persons among our readers abundantly qualified to answer the queries propounded above. Will some one do so?

For the New England Farmer.

GREAT YIELD OF POTATOES.

MR. EDITOR:—A few days since I noticed an article copied from a Providence paper, "that a lot of 50 potatoes, raised thereabouts, weighed 50½ lbs." this does not seem "hard to beat," and would rather place that fifty among my small ones.

I have raised this season, and since seeing the above article have weighed, 25 potatoes which weigh 56½ lbs. If any one can beat this, I will try again. Perhaps at a future day I will give you my method of culture, which has produced as many and as fine potatoes as ever were grown; a field of 3½ acres producing at an average of less than 12 hills to the bushel.

O. S. SANFORD.

Cordaville, Oct., 1855.

REMARKS.—We shall be glad to publish your account when furnished.

LADIES' DEPARTMENT.

DOMESTIC HINTS.

BIRD'S-NEST PIE.—Take a deep baking tin, and set as many apples in it as will cover the bottom. Pare them and remove the core from one end; make a custard and fill each apple, as it is placed in the dish. Then make a thick flour batter, pour over the whole, and bake one hour. Serve with sour sauce.—*Ohio Farmer.*

BOILED POT-PIE.—Take two quarts of apples, pare, core and quarter, then put them into a pot or kettle, and sprinkle on a little sugar, grated nutmeg, and pour in water enough to boil them. Then make a light saleratus crust, and roll one inch thick, of the size of the kettle, and lay it on the apple; boil three-fourths of an hour without cessation. Prepare the sauce in the same way as the bird's-nest pie.—*Ohio Farmer.*

HOW TO BURN COAL.—The great mistake of all is to put on too much coal, as if it were wood—the greater the heat. If too much coal is applied, the combustion is necessarily "choked up," the draught destroyed, and the elements of the coal slowly escaping from it to pass off to the chimney unconsumed, or are disseminated in gases through the room. Whereas, if the strata of coal be but moderate, a red flame will play around the interior of the stove, by which entire combustion and a healthy heat are secured. One ton of coal, therefore, by thorough combustion, will often secure more heat and a healthier atmosphere, than two tons secured in the ordinary way; and this is a fact which can easily be demonstrated. It will be very important, this winter especially, to have attention paid to this rule.—*Graham's Magazine.*

VEGETABLE SEASONERS.—Parsley, celery, thyme, sage, onions, garlic, and other seasoners, should not be put into soups or stews until the soup is nearly done; chop fine, and put in five minutes before the soup is taken from the fire.

COOKIES.—One tea-cup of butter, two of sugar, two eggs, four table-spoonsful of sour milk, one tea-spoonful of pearlsh put into the milk with spices. *Ohio Farmer.*

STEWED CELERY.—The *Horticulturist* recommends highly stewed celery. Cut the blanched or white portion of the celery stalks in pieces about an inch in length, and put them in a sauce-pan over the fire, with milk and water, in equal proportions, barely sufficient to cover them; add a little salt and let them stew gently, until perfectly tender. Then take out the celery, add a piece of butter to the liquor it was boiled in, thicken it slightly with flour, pour it over the celery, and serve it up.

A SOURCE OF SMILES.—Dr. Franklin having noticed that a certain mechanic, who worked near his office, was always happy and smiling, ventured to ask him for the secret of his constant cheerfulness.

"No secret, Doctor," he replied, "I have got one of the best wives, and when I go to work, she always has a kind word of encouragement for me; and when I go home she meets me with a smile and a kiss, and the tea is sure to be ready; and she has done so many little things through the day to please me, that I cannot find it in my heart to speak an unkind word to anybody."



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NO. 3.

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ORGANIC AND INORGANIC MATTER.



ANY allusions are now made to scientific terms in agricultural articles, and farmers are frequently heard to remark that they do not comprehend the precise meaning of the words "organic" and "inorganic," as applied in agriculture.

They are at a loss where to apply the proper distinction which they suppose ought to be observed in judging of the two forms as they occur in nature. All living animals and plants, and their carcasses when the vitalizing principle of life has left them, are composed of organic or organized

matter. These are readily distinguished from inorganic matter by a structure visible to the eye, as observable in the fibres of hemp and flax—the porous structure of wood and flesh, and the more complicated texture of hide and hair. Rocks and soils—the waters of lakes and oceans—all things, in short, that do not live, which neither are nor should be the medium of vitality, are to be included under the general division of organic matter. Plants and animals, of whatsoever description, are composed mainly of the four principal elements—carbon, oxygen, nitrogen and hydrogen. When either animal or vegetable matter is burned, it loses its texture, and disappears, leaving behind only a slight residuum of ash.

The substances above named, being derived from the atmosphere, are released, and are termed organic elements, or constituents. All the various forms and mutations observable in the animal and vegetable kingdoms, are attributable to the chemi-

cal combinations, through the operation of the vital principle of these primary elements. Vegetable oil and starch, sugar and animal fat, are, by fire, resolved into their original elements—carbon, oxygen and hydrogen. These, with all substances of a kindred nature, or character, are the result of, and derived wholly from, organized matter. Wood burned in the open air has its organic constituents dissipated; the inorganic particles only remaining. In the ashes may be detected magnesia, lime, silic, potash, oxide of iron, &c. These latter constitute the inorganic substances in which no structure is visible. Gum, sugar and starch, are all formed in plants, and yet are deficient in pores and fibres; but being produced by the natural operation of living organs, are included, with propriety, under the head of organic matter.

It would be well for our farmers if they could analyze their crops, and also the soils in which they are produced. Few, however, are competent to this, and much, therefore, remains uncertain and unexplained. But as time advances, and science diffuses its light over the earth, these mysteries will gradually pass away; and the farmer will then discover that when he gathers in the rich fruits of his laborious industry in the fall, he collects together a portion of what was his soil, at seed time. In his wheat he will detect lime, flint, and a portion of clay. His Indian corn, a crop in which he justly glories, contains also the same materials, though differently modified in combination, and so do most of the grains he cultivates. All vegetables must have a certain proportion of mineral matter to perfect them, and it is consequently important that he should understand how he can best supply them by animal manures, or mineral applications where there is a deficiency of power to supply them in the soil itself. Animal manures contain these mineral ingredients in a soluble state, and consequently in a condition the more perfectly adapted for immediate appropriation. No particle of matter can enter into, or be assimilated by the vegetable or-

ganism, until its texture has been broken and modified by the solvent action of water.

Thus it will be seen that there is an immediate relationship and constant interchange between the animal, vegetable and mineral kingdoms, and the more perfectly we comprehend the laws of this union, and its phenomena, the more able shall we be to avail ourselves of the riches which nature so prodigally holds forth as an encouragement to enlightened toil. We should ever bear in mind the important fact that manures are endued with degrees of energy, partly from their innate richness, and partly from the facility and promptness with which they part with their fecundating particles to the soil, and to the roots of plants. These are given off only in solution, or in the form of solution or aerified bodies, (gas,) the first taking the name of liquid manure, which penetrates the soil and is absorbed by it to feed the roots of the crop, and the other as air, which, if not absorbed and fixed by some substance for which it possesses a strong affinity, will pass into the atmosphere and be lost. It will hence be seen that the art of manuring consists, not so much in the liberality of our benefactions to the soil, as in the competency of the measures we adopt to prevent the escape of the soluble and gaseous products of the matters applied. It has been estimated by a late writer, that more than one-half of all the active nutrimental matter, formed by the consumption and decay of organic substances, is wholly lost in consequence of the imperfect and thriftless habits which regulate the conduct of our farmers in applying them. This is, indeed, an important consideration, and no one who contemplates it philosophically, will find cause to question the verity of the remark above quoted.

For the New England Farmer.

DOCTORING A HORSE.

MR. EDITOR:—There has been, and perhaps now is, prevalent among horses, a disease which in many cases has proved fatal. Perhaps what I am about to relate has no relation to that disease; if it has, well—if it has not, the facts in the case I relate will not be altered.

I have a valuable brood mare which has done no work during the winter. She has lived on natural showing hay, without any extra feed, till within the last few days, and is in good condition. About two weeks since, I noticed that she appeared weak—staggered as she left the stall for water, and would stand with her feet unusually wide apart, bracing in the stall, and to move quick would all but bring her to the floor. Her limbs swelled and I feared the result.

During a few days, I gave her potatoes and rowen, not that she was "bound up," but for a change of food. I did not perceive that this produced any effect whatever. Then for three days in succession, I gave her, say four quarts of oats, wet with water, among which I mixed a pint to a pint and a half of good hard wood ashes, which, with a few dry

oats on top, she ate very readily. After eating the second mess, there was a decided improvement, and after the third mess, the mare appeared very like herself again.

This was all I did to her in the way of doctoring, but I gave her good attention by rubbing and feeding, during her illness. She is now bright and hearty as ever.

I am inclined to the opinion that she had a disordered stomach, and that the ashes served to purify it and set it right. Pot or pearlash might have produced the same effect, but would have required more care in their use.

Shrewsbury, Jan. 23, 1856. THOS. W. WARD.

For the New England Farmer.

LIQUID MANURING.

BY PROF. J. A. NASH.

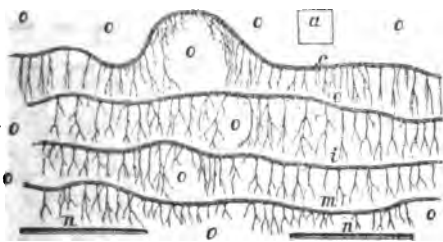
All gardeners, and most farmers, know well that a handful of guano, a pound of super-phosphate, or a shovelful of barn manure, stirred into a barrel of water, and applied after standing a few days to growing plants, will produce effects entirely beyond what would be expected from so small amounts of fertilizing matter.

Facts show that manures, dissolved and greatly diluted, possess astonishing power on the grasses and on growing crops generally, if the land be well underdrained, or naturally porous. Nature has drained most of our land quite enough, some of it too much, owing to which we should be the more willing to drain the rest. Now the gardener, expecting a large income from a small surface, can afford to apply diluted, liquid manure, from a watering pot or a hand engine. The shades would overtake the farmer, before he would have gone over a large field in this way. Can he apply it by means of a water-cart, say with facilities for pumping it into the cart, and then letting it flow upon the land, as in watering streets? I think not profitably. An effort of this kind would be likely to result, either in applying it too strong, or in such an increase of labor, as would overbalance the advantages gained. On small farms, and under the most favorable circumstances, it might succeed, but could not generally. The manure might be applied in a less diluted form, if it were to be distributed in a hard rain, as the falling rain would reduce the too great strength of the manure, and cause it to percolate the soil, instead of lying on the surface to be dried and evaporated by the next day's sun; but this could not be done always, and it ought to be done never, for the farmer has no right to expose his own or his men's health.

I see not, therefore, how liquid manuring can be adapted to any considerable extent among us, unless it be either in the very expensive way employed by some distinguished English farmers, or in one or the other of the two following, which *are not recommended*, for to my knowledge, neither has ever been tried, but simply suggested for the consideration of practical men.

The first suggestion applies only to mow land; and it could take effect only in cases where the mowing is a slope of land below and near the barn, and where a brook, or copious spring of water, could at pleasure be turned into the yard. It proposes to let a stream of water into a tank in the yard, the tank to receive the liquid and a portion of the

solid manures, and arrangements being made for letting in and shutting off the water at pleasure. If the ground to be treated to liquid manure was a regular slope, like the roof of a building, the object could be easily gained, and the land would present a neat appearance; for then the catch drains would all be in parallel lines, and might be at equal distances. In the following cut, the land is supposed to be rolling, and in no way favorable to the carrying out of the plan, except that it lies mostly lower than the barn-yard, and that there is somewhere above the buildings a stream that can be run into the tank at pleasure. Let the tank have a pipe running horizontally from the bottom till it reaches the surface of the ground near the upper edge of the mowing. It should have a gate, and the upper end should be surrounded with a screen, or strainer, to prevent its filling with solid matters. Then each way from the lower opening should be constructed a broad, shallow catch-drain, with the lower bank neatly rounded, and perfectly level from end to end. Below this, and as nearly parallel as the nature of the ground permits, let there be another catch-drain, and so on, as in the cut below:



Let the square, *a*, represent the location of the barn, sheds and yard, *a* marking the place of the tank; *c*, the outlet of the pipe running from tank into the upper catch-drain; *e*, the second catch-drain; *i*, the third; *m*, the fourth; *n, n*, embankments to prevent the liquid manure running out of the lot, if it should reach these points; *o, o, o*, parts of the field too high for irrigation; and the hair lines, rills of the liquid manure, running from one catch-drain to another. If the field above represented have an impervious subsoil, retaining the water, and inclining it to produce the sour, innutritious grasses, it would be bad policy to apply this diluted manure—it might only make bad worse, to put on extra water; but if it were first underdrained, or if it have naturally a light, open subsoil, the effect could hardly fail to be good. In the first place, the water itself, considered merely as for irrigation, would be salutary; and in the next place, it would carry the soluble portions of the manure along and deposit them in the soil, from the surface downward, among the grass roots, more favorably to the growing crop than could be done in any other way. The more elevated portions of the field could receive a coating of manure spread on, or could be tilled, the manure being plowed in, and thus the whole be kept in a productive state. Some may regard all this as mere theory, and if so, they regard it just as it is. I will only say that liquid manuring, could it be accomplished at a moderate rate of expense, would be better in practice than on paper, and we ought, at least, to be inquiring how it can be done.

The other suggestion is, whether liquid manure could not, in particular cases, be conveyed to more

distant fields, by its own weight and pressure. Suppose, for instance, the farm buildings to be elevated, and yet from still higher land, a running stream to be at command; and that in an opposite direction, at a distance of 60 or 80 rods, is a field of, say, 12 or 15 acres of tillage land, lying at a level of 30 or 40 feet lower than the buildings. The cost of laying a lead pipe from the tank to the centre of the field would not be very great. A single hydrant with a hose 90 feet long would enable the operator to throw the liquid manure over the whole field. It would be no very great expense to extend this pipe to other fields adjoining, and there to construct hydrants, to which the same hose could be attached. It would not be best, in such a case, to agitate the manure in the tank very strongly, before drawing it off, but to let it settle so as to be nearly free from solid matters, (the insoluble part of the manure,) and to apply this to lands nearer the barn. I cannot but think that on farms favorably situated for such an operation, a considerable saving of labor and a great increase of crops might be gained, without any very frightful expense.

For the New England Farmer.

WHAT AILS MY COW?

MR. EDITOR:—Can you tell me what ails my cow? Two or three weeks ago the hair around her eyes turned white and came off; afterwards it came off in spots back of her hips and on her thighs; it has since come off in other parts of her body—but principally where the spots first appeared—around the roots of the tail, &c. The skin generally starts with the hair, and a little bloody matter is seen beneath it, which soon dries up and forms a scab. She appears as well as ever—eats and drinks as usual. She is with calf, to come in late next season, and we milk her, but do not use her milk. She gives her usual quantity. (a.) Is it best to keep cattle in the barn, or let them run in the yard in cold weather? Many farmers keep them in the barn mostly, turning them out to drink only once in twenty-four hours. Is this the best way? (b.)

Princeton, Jan., 1856.

A SUBSCRIBER.

REMARKS.—(a.) Can't tell you. Perhaps your cow has been suddenly heated, and cooled off too quick. Has a dog been after her recently? Perhaps she eats concentrated food, such as meal and slops. Feed her on carrots or other roots, and English hay, using the card freely, and you may bring out a new coat better than the old one.

(b.) Cattle do best in a warm and equable temperature. If they can stand in the sun, and away from the wind, two or three hours each day, well; if not, keep them tied up, but in a comfortable manner.

WHEAT CULTIVATION.—Prof. Mapes, in a recent address at the Indiana State Fair, stated that the wheat crops of Ohio had fallen from 35 to 15 bushels per acre. This statement is denied to be true by the editor of the *Ohio Farmer*. He asserts that the average amount of wheat raised per acre in Ohio is now greater than ever it was, and he gives statistics to prove his assertion.

For the New England Farmer.

"IS FARMING PROFITABLE?"

SKETCHES OF WEST STOCKBRIDGE FARMERS' CLUB.

BY J. N. BAGG.

It was remarked, that indolence and bad management are always unprofitable, and these are often allied to agriculture. Eleven hours a day are required of operators in manufactories and workshops, all winter long, and merchants keep their stores open from fifteen to seventeen hours a day.

Few farmers work in winter as many hours as manufacturers. Some, on the contrary, rest all winter, and idle away part of the summer, and these are the ones, usually, that cry out against the profitability of farming.

If farmers were as diligent and constant as other men, they would make as much money.

If farming is unprofitable, how happens it that farmers' families are so well fed and clothed, and so many have money in the Savings Banks?

The farmer's salary comes in by dribblets, instead of a lump. Little by little he receives his yearly stipend. A dozen of eggs to-day, a few pounds of butter to-morrow, pigs, calves, poultry, corn, potatoes, apples, are some of the things he sells.

Land worth ten dollars an acre often pays for itself, besides taxes, interest and expense of cultivation, in a single year. A man in this vicinity sold \$210 worth of potatoes from an acre this year. They were an early variety, and were dug and sold in season to sow the ground with turnips.

Besides, money is not the only thing in which there is profit. Farmers are healthy men. Is health profitable? Ask the invalid. Is good digestion worth anything? Ask the dyspeptic. Is sound sleep good? Ask the sleepless. Is longevity valuable? Ask him who dies in "manhood's early prime."

All these belong to the farmer. They are almost inseparable from his business. They are allied to his calling. Who would not then be a farmer?

A WIDE AWAKE LETTER!

We cannot resist the temptation to publish the following letter from one of our earnest and intelligent correspondents. If our *vanity* would permit it, the excellent suggestions it contains for our brother farmers, would positively forbid it. So here it is, and we believe it is all as true as the book of Mark. Thank you, sir.

FRIEND BROWN:—I take the hint, and respond in the sum of two dollars for the *Farmer, due or not due*. Who ever kept debtor and creditor for a newspaper? I assure you, I contract no debt, where I get so much value received for the two dolls. My friend H., at New Rochelle, says he "takes no paper that combines so much farm instruction and good reading matter;" and without the fulsomeness of compliment, I beg to say, I like its editorials, its dealings in practical advice, and soundness of literature. The Monthly Calendar is always well adapted to its time.

To me, it is a matter of regret that farmers do not write more. If time is short, I, for one, would excuse them with *six lines or less*, in describing a *big beet, pig, turkey, an ear of corn*; or the length of a wheat head. The first page of your paper

always interests and instructs me with something new.

A few days since, I met in Western Mass., one of your correspondents, a Mr. S., of South Deerfield, an eminent farmer, whom I should have accounted "a Barnum," had he not been mounted with an honest blue farmer's frock. He wished me to go and see his farm—haste would not permit, although anxious to do so, when he told me he raised 800 bushels of corn on less than eight acres of ground, and raised his own wheat, and had not bought a barrel of flour for years. Now Gov., this is one of the *working bees*—(does not work *hard*, but *well*) that brings honey to the hive—that speaks with emphasis upon the bread question to the drones of the great hive of the New England farmers—an open question, which can only be answered by bushels of wheat and barrels of flour—that drains their pockets to the dregs. But as sure as there is water in the sea, the example of our friend S. will be adopted by all those noble farmers "down east."

Yours respectfully, HENRY POOR.

New York, January 15th, 1856.

For the New England Farmer.

EDITORIAL ACCURACY.

Milk, four quarts for one pound of Butter—Importance of Editorial Accuracy—Trip to Washington—Farm School at West-boro'.

MR. EDITOR:—The late driving storm, that has filled every avenue to the barn, and the fields and woods to the generous depth of snow, two and a half feet at least, has been peculiarly favorable for the perusal of agricultural instruction from the city. I admire the attire in which your paper is clothed, and the promise it gives of sound instruction. I am glad to know that you are so fortunate as to secure a series of contributions from fountains so reliable as are at your command. When we find editors deliberate and considerate in what they say, and abiding by it, year after year, we have respect for their publications, although we do not approve of all their notions. This remark is brought to mind by the vacillation in the columns of one of your neighbors, much circulated among the farmers, about the superior butter-making qualities of his stock. We had understood him to say again and again, that his *Devons* would yield milk, *four quarts* of which would make a pound of butter. I now understand him to say that he never stated any such absurdity, and to challenge any one to show where he has made such a statement. I have not a file of his papers at hand, and know not where to find one; and therefore will not presume to name the page and time, where the statement can be found—but if no such statement has been made by him, I do not wish to hold him to it, because I do not believe it to be true. I do not believe there can be found, in his herd, or anywhere else, four animals together, that will give milk of a quality through their entire season of milking, (say nine months) that will yield more than *one pound of butter to each eight quarts of milk, lawful measure!* And whoever undertakes to leave an impression different from this, is so far chargeable with an attempt to mislead the public.

I was truly glad to learn that you visited Washington, at the meeting of national farmers there. Hope that the products of their labors will be proportioned to the excellence of the purpose. I am

glad to learn that the energetic President of the association still holds on—for without his energy, skilfully applied, what would it be?

I am truly pleased to see that the Governor was able to speak so favorably of the State Farm School at Westboro'. There is no one of the institutions under the care of the State, from which more is to be hoped, than this, if properly conducted;—there is no one whose influence will be more baneful, if not properly conducted. Only think, here are constantly six hundred youths, between the ages of ten and twenty, training up for good or evil—in a situation to be moulded at will, without any controlling influence of guardians and relatives. If they do not come out valuable members of the community the fault will be on the heads of those who guide them. We hope for the best.

Pardon this hasty scrawl, and believe me ever faithfully yours,
ESSEX.
 Jan. 14, 1856.

PEARLASH.

We re-publish the following article in order to give the correction which some chemical friend sent us on Jan. 5th.

PEARL ASH.—This is the common name for carbonate of potash, and is an alkaline substance obtained from wood ashes. The ashes of the burnt timber are collected and put into cisterns; water is poured upon them, which dissolves all the soluble parts of the ash, and, after standing some time to become clear, is drawn off and evaporated to dryness in iron pots, when the half-melted pearl ash remains. It is then put up in casks containing about 500 weight. Pearl ash obtained by this process is usually of a greyish color, from the presence of impurities; but it is readily freed from these by dissolving it carefully in water, and evaporating the clear liquor. Pearl ash, when pure, is a white substance, of an acrid, caustic taste, easily soluble in water, with which it has so great an affinity as to attract it from the air, unless it is kept in closely corked vessels or casks. It is an article of great utility in many of our manufactures. Soft soap is in part composed of it; many kinds of glass are made by its aid. It is also used by scourers in cleaning wool, &c.; and its use in removing grease and scouring wood-work, paint, &c., is very great, although soda has of late rather superseded it for the latter purposes.

MESSRS. EDITORS:—I note your article on "Pearl-ash" in yours of to-day, and, inasmuch as it is not wholly correct, beg to refer to it.

The lye, after being "evaporated to dryness," leaves a deposit of what is known as black salts, and the pearl ash of commerce is the result of the following after processes, viz: These salts are then placed in an oven, so constructed as to bring as much surface as possible in contact with flame of wood fire, and the impurities are thus burned out, and if properly treated, instead of being of a greyish color, the pearl ash is the very *whiteness of white intensified*.

Touching the matter of its uses, I apprehend that the "soft soap" application would produce a very indifferent commodity for domestic uses; potash (a caustic alkali) being not only more reliable, but more economical.

CHEM.

January 5th, 1856.

FOURTH ANNUAL MEETING OF THE

U. S. AGRICULTURAL SOCIETY.

The United States Agricultural Society met at Washington, in the East Room of the Smithsonian Institution, Jan. 9. Although the severe storm, which had blocked up the roads at the North, prevented many delegates from reaching the city, there was a respectable attendance from various States and Territories.

Credentials were presented by gentlemen representing various State Boards of Agriculture, and State and county societies.

The President, Hon. Marshall P. Wilder, then delivered the following address

ADDRESS.

Gentlemen of the Society, and friends of Agriculture:—Official duty requires me to submit to you, on this fourth anniversary of our Association, a statement of its operations and progress for the past year, and to offer such recommendations as these may suggest in respect to its future mission. The year which has just completed its course has been one of unusual prosperity to the American farmer, in which a kind Providence has rewarded his toil with abundant harvests, with ready markets and remunerating prices. Among the secondary causes which have contributed to this result, we recognize the scarcity produced by the drought of the preceding year, and the demand for American produce created by the war in which many of the countries of Europe are still involved. As philanthropists and Christians we deplore this conflict, yet we cannot lose sight of the fact that it imparts to the agriculture of our country peculiar importance, and, should it continue, will afford an increased demand for the products of our soil. Still our main reliance must ever be upon the progress of society within our own borders, upon the prosperity of our industrial pursuits, and the consequent home consumption of our agricultural products. The commerce of one section of our republic with another, hardly second in importance to our foreign trade, is worthy of the attention and study of our political economists and the wisest of our statesmen; and this commerce is created and sustained by the art which it is the object of our association especially to promote.

Gentlemen, I congratulate you on the progress of our institution during the past year. If it has not accomplished all which we anticipated, it has furnished pleasing evidence of its growing prosperity and usefulness, and strengthened our hopes in regard to its future development.

The arrangements for the Boston exhibition were on a most liberal scale, and so perfectly systematized as to be easily controlled, and to contribute to the comfort and happiness of the multitude in attendance.

The number of entries in all the departments was nine hundred and thirty-one, embracing between one thousand and fifteen hundred animals. The sum awarded in premiums alone was nearly twelve thousand dollars, a larger amount than has ever before been distributed by any other Agricultural Society in our country. The other incidental expenses were very large; yet all these, as will appear from the treasurer's report, were more than

covered by the receipts, leaving a balance to be added to the funds of the Society. This balance would have probably exceeded ten thousand dollars, but for the severity of a storm which entirely suspended the exercises of the occasion, during the 24th inst.

The experience of the last year confirms the opinion before expressed in favor of holding annual exhibitions in different sections of the country, as a means of establishing the reputation of the Society, and of promoting personal acquaintance and practical knowledge, among the most intelligent farmers of our land.

The utility is becoming more and more manifest every year, combining the most healthful recreation of the people, and verifying the remark of Daniel Webster, at the first exhibition of the Norfolk Society in Massachusetts: "The great practical truth and characteristic of the present generation is, that public improvements are brought about by voluntary association and combination. The principle of association—the practice of bringing men together for the same general object, pursuing the same general end, and uniting their intellectual and physical efforts to that purpose, is a great improvement in our age. And the reason is obvious. Here men meet together that they may converse with one another—that they may compare with each other their experience, and thus keep up a constant communication. In this practical point of view, these Fairs are of great importance. Conversation, intercourse with other minds, is the general source of knowledge. Books do something. But it is conversation—it is the meeting of men face to face, and talking over what they have in common interest—it is this intercourse that makes men sharp, intelligent, ready to communicate to others, and ready to receive instruction from them."

I, therefore, recommend to your particular attention any application which may be made in reference to future exhibitions of the society. As the fact is now well established that the exhibitions of the national society in every State advance rather than retard the progress of the local associations within its bounds, such applications may be expected to multiply, and it is worthy of your inquiry whether any additional action of our body is necessary on this subject.

I have the pleasure to inform you, that invitations have been extended to several gentlemen of distinction to deliver lectures before this association during our session. I would, also, recommend that as much time as possible be allotted to the free discussion of agricultural subjects, with a view to elicit the results of experience in different parts of our Union.

It will be remembered that such a course, at our last annual meeting, led to an interesting debate on the relation of political economy to American agriculture. One of the gentlemen who took a prominent part in that discussion, and whose powerful argument is published in the transactions of this Society, has finished his labors on earth, and entered into his rest. Chauncy P. Holcomb, Esq., one of the founders, and a Vice-President of the Association, died at his residence, soon after our last meeting. He was one of the most distinguished farmers of Delaware, and of this Republic; of clear and discriminating mind, thoroughly convers-

ant with the science and practice of Agriculture, and one of its ablest defenders and warmest friends. His private virtues and public services will perpetuate his name, and his memory in the hearts of his countrymen. Of other members, who have deceased during the year, we cannot speak particularly, with the exception of Thomas Hancock, Esq., of New Jersey, who was present at our last meeting, and took part in its exercises, and who, like Mr. Holcomb, entered the spirit world soon after his return from this city. With both of these gentlemen it has been my privilege to be long associated, for the promotion of the rural arts; and I am happy to bear testimony to their integrity of character, and to their zeal and fidelity in the cause of terraculture. Here, beneath this roof, where they mingled their thoughts, and joined their efforts with ours, it is pleasant to speak of their merit, and to record their worthy deeds.

But, gentlemen, while individuals die, associations and institutions survive. It is not, ordinarily, the privilege of those who start any great enterprise, to witness its consummation. One generation prepares work for the next. We are carrying out the designs of our fathers, and realizing the results for which they labored. Our national institution is but the partial development of ideas cherished by the immortal Washington. In his letter of July 20, 1794, to Sir John Sinclair, he says: "It will be some time, I fear, before an agricultural society, with Congressional aids, will be established in this country. We must walk, as other countries have done, before we can run. Smaller societies must prepare the way for greater; but, with the lights before us, I hope we shall not be so slow in maturation as other nations have been."

What the farmer of Mount Vernon, more than half a century ago, desired, we have undertaken; but others must carry on and perfect them. Local associations have been formed in towns and counties, in States and territories of the Union; and these, as he anticipated, have opened the way for our national organization.

The United States Agricultural Society is now an established institution. It is in successful operation, receiving the confidence, patronage and favor of the public; and, in return, it is co-operating with local associations, and dispensing its bounties for the encouragement of individual enterprise and merit. The encouragement thus afforded to American agriculture, and the improvement therein, have helped to till and put under profitable cultivation the immense prairies of the West and the alluvial soils on the banks of our vast rivers—to reclaim thousands of acres of waste land in populous districts, and to restore the exhausted soils of the older States. They have thus increased, many fold, the value of our land, the amount of our agricultural products, and have preserved us from the bankruptcy and ruin, too often consequent upon an excess of trade, or an influx of the precious metals. They have created and sustained trade, spread the sails of a prosperous commerce, and saved us from commercial embarrassment which would otherwise have been as prolonged as those of former years. They have also maintained an equilibrium among all branches of American industry. They have developed, in a remarkable degree, the conservative and progressive elements of the American system, and have taught us that we can safely depend upon our own resources, and become, in the noblest sense,

free and independent. Already our American farm extends from the Atlantic to the Pacific, and it is only a question of time when it shall be bounded on the North by the Arctic, and shall terminate on the South at Cape Horn.

Gentlemen, I have cordially co-operated with you in the inception, organization and progress of the society to the present time, and, in future, I shall be ever ready and willing to contribute to its advancement according to my ability. But I have not the presumption to believe that I possess such qualifications for its presiding officer as to entitle me any longer to the honors of that office. So far as its responsibilities are concerned, I claim to have borne my full share of them, and it is my desire to resign the presidency, and to aid in installing some one of the many gentlemen whom I see around me, better qualified to sustain these responsibilities and more worthy of this high trust. To you, my fellow-associates, who have borne with me the heat and burden of the day, I tender my heartfelt acknowledgments for your cordial support and confidence; and I beg to assure you all of my continued interest in our association, and of my affectionate and high regard for you personally.

Gentlemen, while we review with unfeigned pleasure the extension of our agricultural domain—the advances of improvement in the arts of husbandry—the increase of the products of our soil—the interest manifested everywhere in the objects which we seek to promote—the contributions which wealth and science are continually making for the advancement of this cause, and the numberless other proofs of progress which encourage and cheer us in our noble work, yet let us remember that the prosperity of our association must ever depend upon the untiring energy and perseverance of its members. We rejoice that it is so, for activity is the life, health and triumph of enterprise. To no people on the face of the earth is this more applicable than to the farmers of the United States of America, where every man is the arbiter of his own fortune.

What a cheering prospect is before the American yeomanry! What a destiny awaits them!—one in all the rights and privileges of a common citizenship—the conservators of a common country—the almoners of Heaven's bounty to the reduplicating millions of our population. Bound together by a chord of living sympathy, they are and ever must be, the guardians of the public weal; and the power that would paralyze their arm destroys the last refuge of our nation's hope.

*"Princes and lords may flourish or may fade;
A breath can make them, as a breath has made,
But a bold yeomanry, our country's pride,
When once destroyed, can never be supplied."*

Success, therefore, my brethren, to the American farmer!

Hon. B. B. French, treasurer of the society, then presented his annual report, showing the balance in the treasury to be \$4,019 15.

On motion, Major B. P. Poore, of Massachusetts; D. Jay Browne, of Washington, and C. H. McCormick, of Illinois, were appointed to audit the treasurer's accounts.

The President read a letter from Mayor Conrad, of Philadelphia, inviting the society to hold its next annual exhibition in that city.

On motion of J. D. Weston, Esq., of Massachusetts, seconded by Col. Anthony Kimmel, the pro-

position was accepted, and referred to the Executive Committee.

A. H. Byington, Esq., of Connecticut, and other gentlemen, discussed the feasibility of holding exhibitions in the city which would guarantee the largest fund.

The President read a series of resolutions passed by the General Assembly of the State of Illinois, asking Congress to donate to each State an amount of land, not less in value than \$500,000, for the establishment of Industrial Universities.

After discussion, the subject was referred to a committee, consisting of Professor Henry, of Washington, Hon. J. D. B. DeBow, Esq., of Louisiana, and A. H. Byington, Esq., of Connecticut, with authority to present the same to the attention of Congress.

D. Jay Browne, Esq., of the Patent Office, made some interesting remarks on the various races of "the horse" to be found in France, with the different government establishments there for improving the breeds of this useful animal. His remarks, with a paper upon the same subject, suggests a similar system for this country. The importation of animals of different breeds, for purposes of propagation, could not fail to be of immense advantage.

Captain Van Vliet, U. S. A., read a valuable paper on the domestication of the wild animals of our western prairies. It was replete with interesting information, especially on the "Rocky Mountain sheep."

Professor Baird exhibited specimens of the horns and skins of these sheep, and urged experiments to ascertain if they could be domesticated.

On motion of Mr. Browne, the Executive Committee were authorized to take such steps for the domestication of the Rocky Mountain sheep as they might deem expedient.

A resolution providing for the importation of seed wheat was discussed and adopted.

Several other papers were read, and the society then adjourned until to-morrow, at ten o'clock.

SECOND DAY.

The society was called to order at half-past 10 o'clock, and quite a large number of gentlemen reported themselves, who had been detained by the storm. Others are yet on the "other side of the Susquehanna," and one delegation of ten members of the Massachusetts societies is among the weather-bound. President Wilder read several letters relating to annual exhibitions. Mr. Secretary Guthrie, delegate from the Southwestern Agricultural society, invited the National Society to hold its next annual exhibition at Louisville, Ky. Resolutions from the Maryland Mechanics' Institute were read, inviting the National Society, in eloquent and earnest terms, to hold its next exhibition in Baltimore.

On motion of Col. Anthony Kimmel, the invitations were referred to the next annual meeting, it having been decided to hold the next exhibition at Philadelphia.

Major Poore, from the committee appointed to audit the Treasurer's accounts, reported that they had attended to their duty, and had found everything correct.

Dr. Beechman, of New York, presented the following resolution:

Resolved, That agriculture and other great interests of the State would, in the opinion of this socie-

ty, be materially benefited by extending to the land the system of meteorological co-operation and research which has done so much and is doing so much for commerce and navigation at sea; and that this society do hereby earnestly recommend such extension to the favorable consideration of Congress.

This resolution was debated, Lieut. Maury, Prof. Henry and other eminent gentlemen participating.

C. B. Calvert, Esq., of Maryland, replied to Professor Henry's remarks, especially his insinuation that Lieut. Maury was not entitled to the credit of having made meteorological observations practically useful. With due respect to Professor Henry and the Smithsonian, he would not have the matter pass from the hands of that eminent and distinguished man, who had not only proved himself a scientific man, but a man of practical science.

Judge S. H. Huntington, of Connecticut, hoped that a committee would be appointed to consider the subject, before presenting it to Congress.

C. B. Calvert, Esq., objected to this, as calculated to detract from the honor belonging to Lieut. Maury.

Lieut. Maury, Judge Huntington, Professor Henry and Horace Greeley spoke on the question of reference to a committee.

D. J. Browne, Esq., wished to make some explanations of meteorological observations carried on at the Patent Office.

Major Poor, regretting that the discussion was becoming a personal scientific quarrel, into which subjects had been introduced as illegitimate as was the "scion of the House of Northumberland," who had been alluded to, moved the previous question.

The motion was sustained, and the resolutions were then carried, viz:

Resolved, That agricultural and other great interests of the State would, in the opinion of the society, be materially benefited by extending to the land the system of meteorological co-operation and research which has done so much and is doing so much for commerce and navigation at sea; and that this society do hereby earnestly recommend such extension to the favorable consideration of Congress.

Resolved, That a committee of three be appointed by the President to communicate the above resolution to each member of Congress, and to solicit his co-operation. The result of their application in behalf of the great agricultural interests of the country to be reported at the next meeting of the Society.

Major Poor, Judge Huntington, and C. B. Calvert, Esq., were appointed as this committee.

C. B. Glover, of the Patent Office, read a paper on "Agricultural Entomology," which, on motion of G. W. P. Custis, was ordered to be published in the transactions.

THIRD DAY.

The society was called to order by the President.

Professor Henry read a paper on the "origin and action of Power as applied to the vegetable kingdom." On motion of Col. Calvert, it was ordered to be published.

Col. Kimmell, from the nominating committee, presented a list of officers for the ensuing year, and an expression of regret that Major Poor had positively declined serving further on the Executive Committee. After some discussion as to the qualification of the Vice Presidents nominated, the report

was accepted. The officers were then elected for 1856, viz:

PRESIDENT,

MARSHALL P. WILDER, of Massachusetts.

VICE PRESIDENTS,

J. D. Lang, Maine,	M. L. Underwood, Kentucky,
H. F. French, New Hampshire,	John Bell, Tennessee,
Simon Brown, Massachusetts,	Jos. A. Wright, Indiana,
J. J. Cooke, Rhode Island,	F. A. Kinnicut, Illinois,
J. A. Rockwell, Connecticut,	T. Allen, Missouri,
Dr. J. P. Beekman, New York,	Roswell Babee, Arkansas,
Geo. Vall, New Jersey,	J. C. Holmes, Michigan,
Isaac Newton, Pennsylvania,	D. J. Yulee, Florida,
J. W. Thompson, Delaware,	C. Durkee, Wis.,
Anthony Kimmel, Maryland,	P. Ord, California,
G. W. P. Custis, Virginia,	W. W. Corcoran, D. C.,
H. K. Burgwyn, N. Carolina,	J. M. Gallegos, New Mexico,
R. W. F. Alston, S. Carolina,	H. H. Sibley, Minnesota,
R. Peters, Georgia,	P. W. Gillet, Oregon,
C. C. Clay, Jr., Alabama,	C. Lancaster, Washington Ter.
M. W. Phillips, Mississippi,	E. Hunter, Utah,
John Perkins, Jr., Louisiana,	B. R. Chapman, Nebraska.
Gen. Worthington, Ohio,	

EXECUTIVE COMMITTEE,

J. A. King, New York,	J. Jones, Delaware,
A. L. Elwyn, Pennsylvania,	W. H. Taylor, Ohio,
D. Jay Browne, D. C.,	Richard P. Waters, Mass.

SECRETARY—W. S. King, Boston, Mass.

TREASURER—B. B. French, D. C.

Col. Wilder, in an eloquent and impressive speech, accepted the office.

On motion of Gen. Worthington, of Ohio, it was *Resolved*, that the members of this society return to our worthy President our heart-felt thanks for the great ability, the indefatigable zeal and kindly courtesy with which he has discharged the duties of his office, and also for yielding his wishes to ours in consenting to retain his station.

This resolution was received with great satisfaction by all present, and cordial testimony to its truth was born by gentlemen who had witnessed the indefatigable labors of President Wilder.

A paper on agricultural chemistry was read by Professor John D. Easter, of Baltimore, and ordered to be published in the transactions.

Mr. Browne presented a paper on guano, which was read and ordered to be published in the transactions.

Reports from Professors Henry and DeBow on the grant of land by Congress for Industrial Colleges in each State, were discussed and referred to the next meeting.

Other business was then transacted, after which the venerable G. W. P. Custis was introduced to the society, and delivered a most eloquent address, referring to his youthful recollections, when he had seen the "Father of his Country" shooting birds on fields, now the site of this metropolis. He gave a vivid sketch of our national rise and progress, both agricultural and social. In conclusion, taking such a farewell as the oldest member present might take, he would give that noblest of human sentiments: "Success to agriculture."

The society adjourned *sine die*. The next meeting will be held here next year—the next annual exhibition will be held at Philadelphia, in September or October, and will doubtless be a grand affair.

☞ Potash constitutes one-half of the weight of potatoe ashes. This shows the importance of wood ashes, as a manure for this crop. As there is 9-60 per cent. of sulphuric acid in the potato ash, it is apparent that plaster (sulphuric acid and lime,) is also necessary to insure a good crop.



GRADE COW, BEAUTY.

One of the marked evidences of the improvement among farmers, is the attention which has been given of late years to neat stock. It is not alone an effort to introduce new crosses, or distinct breeds, but a better appreciation of their wants, and a better knowledge of their physiological structure. Few cattle-breeders now leave their stock exposed to the elements, or expect them to thrive, unless kept in a comfortable condition. But the time has been, when we heard an aged farmer, of a good deal of experience, say that a portion of his stock thrived as well in the open air through the winter, as did those who were sheltered in his barn! It is now generally believed, that the food of the animal, like fuel in the stove, generates heat, and that exposure creates a new demand for food.

Stock is tended better, every way, than it used to be. They are fed more liberally, kept warmer, cleaner, and protected from dogs, and the stronger ones of the herds. Their natures, constitution, habits and wants are studied more, and are better understood.

The Grade Cow, Beauty, represented above, is the result of the new interest in stock which we have spoken of above. She is the property of GEORGE M. BARRETT, Esq., of Concord, in this State, one of the largest and best farmers, as well as one of the best citizens of the commonwealth. She received the first premium at the late United States Fair; is four years old last July, half Ayrshire, and raised from Mr. B.'s Ayrshire and native stock; had her first calf Sept. 8th, 1854, and averaged fifteen quarts of milk a day for two months, on grass

feed only, and gave seven quarts a day on the 20th June last, when he discontinued milking her. She dropped her last calf on the 23d of August, 1855, and since that time, up to the first of November, (when his statement was made to us,) gave *sixteen quarts* of milk per day on grass, with an occasional feed of corn-fodder.

We understand that this cow, as well as other animals of his stock, prove to be excellent in every way; are good milkers and feeders, hardy, gentle, and lay on fat or flesh as rapidly as any other stock, when producing the same amount of milk.

There is plenty of room still for improvement in our cattle. What is required is patience, study and intelligence; and without these, there can be little hope of permanent and important improvement.

TREES FROM SEED.—"A few years ago we made a large collection of the seeds of shade and ornamental trees, both deciduous and evergreen, and planted with much care, but did not get a seed to vegetate. This season we have found out what was the matter; we planted too deep. It is well known that in the pine-regions of Georgia, this has been a great mast year, and we now find everywhere where the winged seeds have met the surface soil, they have thrown out roots, and begun the form of a tree. They had no planting but what nature gave them, and dame nature is a tolerable horticulturist. We invariably plant tree seeds; just soil enough to preserve the moisture is all that is necessary. An ornamental tree, grown from seed, may be made anything the cultivator wishes it. A fruit tree grown by seed is most likely to be healthy, and may prove a sure and valuable variety. It has been a question of time with most of us; we could not

wait for tree seeds to form trees. A pine seed will make boards in twelve years. Apple seeds will make fruit-bearing trees in four years. Grapes in eight and ten years. Peaches and plums in two years. The China tree seed will make a good shade tree in four years. A man may have a forest or an orchard from seed, if he will. Even the acorn and hickory nut may be planted with profit. Plant tree seeds, reader, and you will be astonished at the work of your hands in a few years."—*Exchange*.

For the New England Farmer.

GOOD AND BAD FARMING.

BY JOHN GOLDSBURY.

Whoever has travelled much, in any part of our country, whether North or South, East or West, cannot have failed to notice the different appearance of different farms with regard to neatness, economy and thrift. On one farm, everything is in good order, and appears neat and tidy. The buildings are all in good repair, and the yards, about the house and barn, look as though they had just been swept and garnished; no litter, or lumber of any kind, is to be seen about the establishment. "There is a place for everything, and everything is in its place." Everything *on or about* this farm, betokens neatness, economy and thrift. On another farm, how altered is the scene! Here, everything looks as though a hurricane had swept over the place, scattering litter, rails and lumber in every direction. The house, and barn, and fences, appear in a dilapidated state; and all the yards about the establishment are filled with broken-down carts and carriages, plows and harrows, wheelbarrows and ox-yokes, and implements of husbandry of every description. Everything *on or about* this farm, indicates a want of taste, neatness, economy and thrift.

The same is observable with regard to towns. Go into one town, where considerable attention has been paid to agriculture, as a science—a town not remarkably distinguished for the richness and fertility of its soil, or the care with which it may be cultivated—being rather a poor, hard and rocky soil, and there you will behold comfortable, convenient and well-built farm-houses and well-filled barns, cultivated fields and fruitful orchards, good walls and fences, large stocks of cattle, horses, sheep, swine, &c., and everything indicating the taste, neatness, economy, industry and thrift of the farmers. Go into another town, in which little or no attention has been given to the cultivation of the earth—a town possessing all the natural advantages of a fertile, well-watered and exuberant soil, and of a favorable location and mild climate,—and there you will behold a scene, which, if it do not make you "stare like a cat in a strange garret," will, at least, induce you to quit the town as quick as possible, lest the contagious influence of such a scene should overshadow your spirit with gloom. For, as you cast your eyes about you, and behold the miserable prospect on every side,—houses, barns, and other buildings, grown old and going to decay, fields covered with weeds, brambles, briars, thorns and thistles—as you behold all this, you will be convinced, that some blighting, withering curse must have fallen upon the inhabitants of that town, and paralyzed all their energies. Otherwise, why have they neglected to cultivate and improve their

lands, to repair their rusty old buildings, and to repair their broken-down fences? In order to account for such negligence on their part, one would be inclined to think that they must have been the worshippers of Bacchus, or of the drowsy god Somnus.

Having taken a comparative view of the condition of different farms in the same town, and of whole towns under different cultivation, let us now endeavor to arrive at some just estimate of their comparative values. Everything is said to be worth what it will bring in the market. Whether or not the market price be the true standard value of everything, it is not necessary for us to determine. The value of a farm, all other things being equal, should be estimated by the abundance, variety and richness of its productions, and by the facility and ease with which it can be carried on.

A farm, which is made to produce twice the amount of productions, with the same labor and expense bestowed upon another, is certainly, for all practical purposes, worth twice as much money, though it may not bring twice as much in the market. The same is true with regard to a farm, on which the owner is obliged to skim over twice the number of acres, and perform double the amount of labor, in order to obtain the same amount of crop. It is cheaper—it is easier—it requires less labor to cultivate a few acres and cultivate them well, than to attempt to cultivate a large number, and do it imperfectly. We see, then, that the highly cultivated farm is the most valuable and productive farm, and will generally bring the most in the market. It is skillful, practical and scientific agriculture, which renders a farm truly valuable and productive.

The same is true with regard to towns which are made up of the different farms contained therein. Every town is to be estimated according to its productiveness; and this depends, in a great measure, upon the degree of the attention which has been paid to agriculture. No matter how a town stands on the State valuation list, its real value depends upon its resources—its ability to produce all the necessaries, the comforts, the conveniences, and the luxuries of life; and these depend, in a great measure, upon the knowledge and practical skill of its cultivators. A town, in which the science of agriculture has never been developed, cannot vie with another, in which art and science and persevering effort, have, for a long series of years, been carrying forward the great work of improvement. The river does not gush up at once in full tide from the ground; but it commences in a thousand springs, whose waters flow on and mingle until they become a flood, when the ships float and the sea monsters play. The sun does not rise up instantly, deluging the earth with a sudden burst of light; but faintly, at first, his rays tinge the eastern horizon; and while the shadows of the dark night are still upon the earth, higher and still higher mounts the sun, until at last his broad light is poured in full splendor upon the world, and it is day. So it is with the science of agriculture. Its beginnings are small; but it increases as it advances, till it finally changes the whole aspect of a town.

THE MERCHANT'S CLERK AND THE PLOWBOY.—

The young man who leaves the farm-field for the merchants desk or the lawyer's or doctor's office, thinking to dignify or ennoble his toil, makes a sad

mistake. He passes, by that step, from independence to vassalage. He barter a natural for an artificial pursuit, and he must be the slave of the caprice of customers and the chicanery of trade, either to support himself or to acquire fortune. The more artificial a man's pursuit, the more debasing is it morally and physically. To test it, contrast the merchant's clerk with the plowboy. The former may have the most exterior polish, but the latter, under his rough outside, possesses the truer stamina. He is the freer, franker, happier, and nobler man. Would that young men might judge of the dignity of labor by its usefulness and manliness, rather than by the superficial glosses it wears. Therefore, we never see a man's nobility in his kid gloves and toilet adornments, but in that sinewy arm, whose outline, browned by the sun, betoken a hardy, honest toilet, under whose farmer's or mechanic's vest a kingliest heart may beat.—*Hunt's Magazine.*

HARVEST HOME.

Proud ships may hold both silver and gold,
The wealth of a distant strand;
But ships would rot, and be valued not,
Were there none to till the land.

The wildest heath and the wildest brake
Are rich as the richest fleet,
For they gladden the wild birds when they wake,
And give them food to eat.

And with willing hands and spade and plow,
The glad'ning hour shall come,
When that which is called the "waste land" now,
Shall ring with the "Harvest Home."

PARSNIPS FOR MILCH COWS.

Will you inform me, through the columns of the *Country Gentleman*, respecting the qualities of parsnips as feed for dairy cows through the winter. I have a quantity, and would like to know if you think them good feed for milking cows.

Lexington, Ky.

THOMAS JINKS.

Parsnips are very highly esteemed as food for milch cows, as well as for pigs and poultry, in the Island of Jersey, where they are extensively grown for this purpose. We quote from the *Cyclopedia of Agriculture*: "When parsnips are given to milk cows with a little hay, in the winter season, the butter is found to be of as fine a color and excellent flavor as when the animals are feeding in the best pastures. As parsnips contain six per cent. more mucilage than carrots, the difference may be sufficient to account for the superior fattening, as well as butter-making quality of the parsnip. Don observes, that 'in the fattening of cattle the parsnip is found equal if not superior to the carrot, performing the business with as much expedition, and affording meat of exquisite flavor, and of a highly juicy quality; the animals eat it with much greediness. The parsnips are given in the proportion of about 30 lbs. weight, morning, noon and night; the large ones being split into three or four pieces, and a little hay supplied in the intervals of these periods. The result of experiment has shown, that not only in neat cattle, but in the fattening of hogs and poultry, the animals become fat much sooner, and are more healthy than when fed with any other root or vegetable; and that, besides, the meat is more sweet and delicious.'"—*Country Gentleman.*

NORTHFIELD, MASS.

This town is one of the most beautiful in New England. It is the Indian *Squekeag*, and was settled in 1673. It suffered severely from Indian depredations, and was laid waste by them a few years after its settlement. In 1685 the people returned and commenced to build and cultivate the land, but in a few years fresh inroads from the Indians destroyed their crops, burnt their log-houses and scattered the inhabitants, so that for many years it was left alone, but with the unmistakable marks of an attempted civilization scattered over the dismal plain. In 1713, after the erection of Fort Dummer, in its vicinity, the hardy pioneers once more returned and rebuilt the town. A large portion of the land is of an excellent quality. Near the river are two distinct plateaus or plains; one, on the bank of the river, and called interval, or meadow, and the other some third of a mile back, and fifty or sixty feet higher than the meadow. This plain extends about a mile in two directions, and on it stands the thickly-settled portion of the town. The main street continues nearly a mile, parallel with the river, is, we should judge, some twelve or fifteen rods wide, and is ornamented by four rows of the most beautiful trees, mostly of the American elm, but interspersed, occasionally, with the rock maple. Standing about two rods apart, and extending three-fourths of a mile at least, they must number some five hundred trees in all.

It was our good fortune to be called into this beautiful town on the evening of the 22d inst., to have an agricultural talk with the good people at their Lyceum, and in passing through the street our attention was instantly arrested by the noble trees which adorn it, and of which it is our purpose now to give a brief account.

In the year 1811, a young man, born in Boston, and there educated to practice law, found himself surrounded by many already possessing "nine points" in the essentials of practice, if not in the substantial acquirements of the mysterious profession. So he cast about to see where he should go to carve out his fortune, and his good genius directed him to Northfield, Mass. There he found the Connecticut, with its green and fertile meadows, higher up a plain about a mile in length and half that distance in width, bounded at each termination of the mile by a limpid brook, sparkling and fresh from the hills which boldly rise from the edge of the plain.

In this lovely valley was once, undoubtedly, a lake, and this plain was made up of the debris of the hills and the alluvion of the river, gathered and deposited through long ages of passing time. In form, nothing could be better adapted for planting a town than this spot. Stretching along on the bank of the river, it gave access to it to a large

proportion of the settlers, and on the other side of the street, fine lots for buildings and farms, and a way to the rich grazing lands farther back. The water was pure, wood for timber and fuel abounded on the hills, while the prospect down the winding valley of the river, or away upon the receding mountains, was lovely in the extreme.

But though the hills and the banks of the river were covered with trees, there were none on this plain, where the early settlement was commenced. Houses had been erected, and the lands cultivated, on either side of the broad road, but the sun fell with unobstructed power, or the winds whirled the dust into the traveller's face.

At the period of this young man's settlement in the town, these lands had been cultivated about one hundred years, and thrifty farmers occupied them, and were gradually increasing their worldly goods, and drawing around them more of the comforts and elegancies of life. But even at this time, the plain was still destitute of trees and shrubs; not a flower, planted by the hand of man, not even a rose, could be found. No ornamental tree, or shrub, or climbing plant, cast a shadow in the burning sun. The road-sides were encumbered with cast off implements of husbandry; the relics of an ancient log house, or some dilapidated vehicle, and among these, the burdock and thistle, the mullein, milk weed and johnswort, were flourishing in rank luxuriance.

Such was the general appearance of the place in 1813, about three years after this gentleman entered it, with the intention of making it his future home. There was within him a love of the beautiful in rural life, which the scene before him aroused into action; and after arranging the whole matter in his own mind, he called on some of the farmers with whom he had become acquainted, on the minister, the physician, and others, and proposed to them to plant four rows of the American Elm, hundreds of which, young and thrifty, were then standing on the banks of the river, through the entire length of the street! By most, the proposition was cordially received, and they were ready to lend a helping hand in the work. But by others it was fiercely opposed, and denounced as "a d——d federal trick"—it being during the war, when parties were strongly arrayed against each other, and when burning jealousies were more common than a desire to embellish and increase the comforts of home. But a survey was made, the lines were struck, and the work went on. The farmer came with his team, the lawyer, and doctor, and minister, and store-keeper came with their implements, and in a few days the noble work was accomplished. But here and there, in front of certain premises, there was a gap! and shot was threatened to be thrown if these public benefactors broke ground there! An so they passed them by, and broke

ground where no guns were charged, or threats made, and the gaps stood as living remembrances of the hostility to the work. The traveller, however, will find no vacant places now—they were afterwards planted with maples by the recusants, and God's sun and rains have matured them into lofty, spreading trees, along with the rest.

There are now four rows of trees extending the whole length of the village, with a carriage-way between the two centre rows, and foot-walks between each outer row and the ornamented grounds in front of the substantial dwellings of the place. The once barren plain is now a rich gem, whose surroundings are the fertile hills, covered with verdure in summer, and dotted with cattle and sheep, or dark with the forests which spring from their sides.

And who was the enchanter that touched and transformed the scene? It was THOMAS POWER, now, and for a long time, the efficient and kind-hearted Clerk of the Police Court, in Boston, whose sympathies know no limits wherever a kind word or a good deed may benefit his kind. We have little reverence for kings, or bishops, or men of high estate, merely as such; but to a nobility like this, we pay the homage of a grateful heart. He has erected a monument more enduring than brass,—for when the trees which he planted shall have mingled with the dust, children's children will repeat in delightful remembrance, the name of THOMAS POWER.

For the New England Farmer.

MEETING AT CHELMSFORD.

MR. EDITOR:—On the evening of Monday, the 21st inst., there was a public meeting of the Chelmsford Farmers' and Mechanics' Association, in the Town Hall. An interesting address was delivered by Hon. Simon Brown. After the address, there was a discussion, in which Dr. Bartlett, Mr. Hodgman, Rev. Mr. Bromer, of Chelmsford, Dr. Reynolds, and Jacob B. Farmer, of Concord, and the orator of the evening, participated. The speakers showed that they were accustomed to the discussion of scientific, as well as practical subjects—that they were in the habit of thinking, and discriminating, and making careful observations. The hall was well filled by ladies and gentlemen, and the meeting was presided over in a very felicitous manner by Otis Adams, Esq., a gentleman who has the right tact for a presiding officer. He has much dignity and courtesy, and a great fund of mother wit. The fact that so large a number of the good people of this town assembled on a cold evening, when the roads were piled up with snow, shows a deep interest in the subject, and an earnest desire to obtain knowledge. Such meetings cannot fail to be useful. They tend to impress upon the young the importance of making themselves acquainted with the various branches of knowledge pertaining to agriculture. They tend to elevate to a higher rank in their estimation, the business of farming, and to give it that importance and dignity which intrinsically belong to it. When men of learning, talents and enterprise, will devote to agriculture the same energy which they

have hitherto devoted to professional pursuits, to commerce and to politics, they cannot fail to succeed, and at the same time, to give a character and influence to the business, which will induce ambitious and enterprising young men to engage in it, instead of resorting to the city, and burying themselves in dark and dingy counting-rooms, and inhaling the villanous smells and gases of foul docks, and mouldy cellars, and smoking lamps, instead of the pure air of heaven in the open fields, and entangling themselves in the mysteries and anxieties of trade, in which nine out of every ten are sure to fail. It is such men that agriculture needs, men, who, after acquiring a good education, and cultivating all their faculties in the best manner, shall then devote the dew of their youth and the strength of their manhood to the cultivation of the soil. Men who have acquired wealth by other pursuits, and then engage in farming to gratify their taste and amuse their fancy, will never do much to improve practical agriculture, or raise the character and standing of the farmer. R.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 1.

SOIL AND CLIMATE.

MR. EDITOR:—I shall attempt, in a few numbers, to interest you and your readers with such facts as I can collect respecting the rural economy of England, or rather of the British Isles.

In the first I shall endeavor to give some account of the theatre of agricultural operations in these Islands—the soil.

The British Isles have a total area of 77,394,433 acres. England proper has about thirty-two million acres. But these seventy-seven million acres are far from being of uniform fertility; on the contrary, they exhibit greater differences than can be found in any other country. England alone forms about one-half of the whole territory, while Scotland and Ireland divide the remainder between them in nearly equal proportions. Each of these three grand sections should itself be divided in respect to farming, as in other points of view, into two separate parts, England into England proper and Wales; Scotland, into Highlands and Lowlands; Ireland into south-east and north-west regions. Enormous differences exist between these different districts.

Of the thirty-two millions of acres in England, two millions and a half are, and remain, entirely unproductive, having hitherto resisted all attempts at cultivation. Of the remaining twenty-nine and a half, two-thirds at least are ungrateful and stubborn lands, which human industry alone has subdued.

We pause to ask, whether the soil of New England, which by so many is considered such poor farming land, is naturally inferior to that of Old England?

But we will be more minute in our description of the soil of the British Isles. The southern point of the Island, forming the county of Cornwall and more than half of Devonshire, is composed of granite soils. There, in the ancient forests of Exmoor and Dartmoor, and in the mountains which terminate the Land's End, and those verging on the Welsh peninsula, are nearly two and a half

million acres, of little value. In the north of England are more mountains, which separate England from Scotland, and ramify through the counties of Northumberland, Cumberland, Westmoreland, and parts of Lancashire, Durham, York and Derbyshire. This region contains upwards of five million acres, worth scarcely more than the former.

Wherever the ground in England is not hilly, it is, in general, naturally marshy. The counties of England and Cambridge, now reckoned especially the first among the most productive, were formerly but one vast marsh, partially covered by the sea, like the polders of Holland opposite. In other parts of the Island are extensive sands abandoned by the sea,—the county of Norfolk is nothing else. There remain in England, the undulating hills which form about half its whole surface, but these lands are not all of the same geological formation. The Thames basin is composed of a stiff clay, called London clay. The counties of Essex, Surrey, and Kent, as well as Middlesex, belong to the clay-bed called in England, *stiff land*, and well known as exceedingly troublesome. Left to itself, this clay never dries in England, and when not transformed by manure, and improved by draining, farmers despair of making anything of it. It prevails throughout the south-east of England, and makes its appearance in many parts of the midland districts, as well as in the east and north.

A long band of chalky lands, of indifferent quality, runs through this great bed of clay, from south to north, forming the greater portion of the counties of Hertford Wilts and Hunts, the chalk showing itself, almost in a pure state, on the surface.

The sandy clay lands, with calcareous sub-soil and the loams of the lower valleys, occupy only about ten millions of acres of England. The rivers being short and the valleys confined in the narrow island, alluvial lands are rather scarce. It is light soils which predominate in England, what were formerly called, *poor lands*, or moors.

I beg the reader to dwell on this description of the soil of England, and to think what cultivation has made it. Now, a few words of the climate. The mists and rains are proverbial; its extreme humidity is little favorable to wheat, which is the prime object of all cultivation; few plants ripen naturally under its dull sky; it is propitious only to grasses and roots. Rainy summers, late autumns, and mild winters, encourage, under the influence of an almost equal temperature, an evergreen vegetation. Here the action of climate stops—nothing need be asked of it, which demands the intervention of that great producing power—the sun.

How much more propitious is the summer and autumn climate of New England to ripening the fruits of the earth when the farmers, by deep tillage counteract the effects of drought. I will not say that the New England winter climate is as favorable for the preparation of land, for crops, or for the keeping of stock, as that of our father-land.

A few words concerning Wales, Scotland and Ireland. Wales is a mass of mountains covered with barren moors. Including the adjacent islands and that part of England bordering upon it, it contains five million acres, only half of which are capable of cultivation.

The two divisions of Scotland, the Highlands and Lowlands, are pretty equal in extent, and contain about ten million acres each. The Highlands, without exception, form one of the most unfertile

and uninhabitable countries of Europe. There is an enormous granite rock cut up into sharp peaks and deep precipices, and to add still more to its ruggedness, extending into the most northerly latitudes. More than three-fourths of the Highlands are uncultivated, and the small portion which it is possible to work, requires all the industry of the inhabitants to produce any thing.

Even the Lowlands of Scotland are far from being every where susceptible of cultivation. Numerous ridges cross the country. Out of ten million acres, five are nearly unproductive; the other five million exhibit almost everywhere prodigies of the most improved farming, but only two million and a half are of rich and deep soil; the rest is poor and thin. As to climate, snow and rain fall in great abundance, and the fruits of the earth have only a short and precarious summer for bringing them to maturity. Edinburgh is in the same latitude as Copenhagen, and Moscow.

Of the two divisions of Ireland, that of the north-west, embracing a fourth of the island, and comprehending the province of Connaught, with the adjacent counties of Donegal, Clare, and Kerry, resembles Wales, and, in its west parts, the Highlands of Scotland. Here, again, are five million of unsightly acres, the frightful aspect of which has given rise to the proverb, "Go to the devil or Connaught." The larger or south-east division, embraces three-fourths of the island, and includes the provinces of Leinster, Ulster and Munster, and equal to about fifteen million of acres, is at least equal in its natural fertility to England proper. It is not, however, equally good, and the amount of humidity there is even greater than in England. Extensive bogs cover about a tenth of its surface and tracts of mountains another tenth. In fact, only twelve and a half of the twenty millions of acres in Ireland are cultivated.

I think I have shown from the above, that, from whatever causes, the agriculture of Great Britain excels that of other countries, as it certainly does excel the agriculture of all other countries, its excellence is not owing to the natural fertility of the soil, nor to the climate of the British Islands.

Having shown this fact, I shall now proceed to show *how* it is that the agriculture of England is richer than that of any other country, and then inquire *why* it is so. M.

For the New England Farmer.

PASTURES IN CHESHIRE CO., N. H.

MR. EDITOR:—On seeing an article in your last, bearing the signature of "R. B. H.," concerning the land in Cheshire County, N. H., it occurred to me that I might give the gentleman some information on the subject desired. I was born and bred in the "Old Granite State," have lived twenty-five or thirty years in a town adjoining Jaffrey, and my business has been such that I have had occasion to visit that town, as well as others in the county; have visited the Monadnock a number of times, and call myself well acquainted with the land in this vicinity. If New Hampshire makes less butter and cheese than she did formerly, it is no doubt owing to the increasing manufactures; but, the pasturing around the Monadnock, in my opinion, has been, and now is, in good condition. I was very much

surprised to hear that cattle have to resort to the cane-brakes and swamps for sustenance. Pray, sir, did you not find this white grass on the mountain peak instead of pasture land, and was it as poisonous to grasshoppers as cattle? However, there may be some barren spot of the kind that has not yet come to my knowledge; if so, and "R. B. H." is the unfortunate possessor of it, I would advise him to burn it, or abandon it for the West at once.

JUDAS WILD.

THIRD LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY E. H. ROCKWELL.

[The first meeting of this series was held at the State House, on the evening of Tuesday, Jan. 15, and was organized by the election of an "Executive Committee," to give direction to the business of the meeting. This committee consists of Messrs. CHARLES L. FLINT, Secretary of the Board of Agriculture, Messrs. JAMES FISHER and VELOURS TAFT, of the Senate, and Messrs. R. P. WATERS, SAMUEL L. PARSONS, and EDWIN COOLEY, of the House. No definite subject for discussion having been announced, remarks upon several topics were made by Messrs. PARSONS, of Ludlow, TAFT, CHASE, HALL, DARLING, MANSFIELD and FISHER.

The second meeting took place on the 22d inst., and the subject discussed was *Farm Implements*. Mr. FLINT illustrated a lecture on Plows and Plowing by various diagrams of plows and other implements, and Messrs. PROCTOR, DODGE, WITHERILL and PARSONS, of Ludlow, engaged in the debate.]

The third regular meeting of the Legislative Agricultural Society was held in the Hall of the House of Representatives, on Tuesday evening, at 7 o'clock.

The number in attendance at the hour appointed was very good. The subject presented for the consideration of the meeting, was, "*Farm Implements. Plows, and the Preparation of Land.*"

The meeting was called to order by Dr. FISHER, of Worcester, a member of the Executive Committee who introduced to the meeting, FRANCIS DE WITT, Secretary of State, as the President of the meeting, who briefly stated the subject proposed for discussion, and invited gentlemen to express their views upon it.

C. L. FLINT, Secretary of the Board of Agriculture, suggested that at the last meeting there were some doubts expressed as to whether there had been any actual improvement in plows, for the last hundred years or more, and he believed there might be some one now present who would give some reason for those doubts.

Mr. JOHN BROOKS, of Princeton, said that he did not call all changes improvements, and he did doubt whether even going back a century, there had been as much improvement in plows as was sometimes claimed. The Roman plow was made to turn the furrow from the land plowed. *Perhaps* our modern plow would do it better, but he was not quite sure of it. He was not sure that on some sandy land, like that of Cape Cod, the old Roman plow would not be better than the modern plow. Sixty years ago, or more, Mr. Jefferson wrote a letter to Sir John Sinclair, giving a description of

the mould-board of a plow as it should be. He described it as forming a perfect wedge, which was the true scientific principle. Mr. Brooks said he did not know of any plow constructed on that principle now, and therefore he thought there was a doubt as to whether there has been any improvement in the mould-board.

A plow should run easy, and do its work well at the same time. The rubbing surfaces are the same—iron and earth—in the ancient and modern plow. The new one does not run so easy as the old one therefore, if it is of the same construction; because it is heavier. A wooden plow with a wooden mould-board runs easiest. A wooden shod sled runs easier than one shod with iron. Wood and earth produce less friction than iron and earth.

The modern plow has not a sufficient angle at the land side. The Michigan plow, however, leaves the land light, and in that respect operates well. The old Dutch plow, for the same reason, was a good one. If these are facts, he could not see what improvement there had been in plows. The modern plow is heavier, and does not do its work any better, nor generally so well as the ancient one, of the same construction. Though changed within the last sixty years, he could not see that it had been improved. On the subject of plows, at this point in his remarks, Mr. Brooks cautioned against buying plows merely on the recommendation of others. He had paid \$150 for plows within the last fifteen years, which were not worth two cents to him now.

He next compared the ancient and modern *Hoe*. He thought the ancient one quite as good as the modern. The modern one is heavier. He admitted that the old-fashioned one would clog more than the new; but then the new was heavier, and was more liable to get out of repair. The new hoe costs more than the old, and the amount of labor expended in working with a hoe which clogs—as the old one does—was balanced by the increased expense of the new hoe. Labor must be employed to earn the extra amount of money to buy a new fashioned hoe, and that labor which would be necessary to earn the extra money, would do the work with the old hoe. So that it amounts to the same thing whether you expend a certain amount of force with the old hoe, or buy a new one and then spend the same amount of force or labor to pay for it. This argument seemed to excite some incredulous smiles on the part of the audience, and gave rise to some cross-questioning; but nothing was elicited.

Mowing Machines were next spoken of, and these Mr. Brooks thought were an improvement wherever they can be used. There were disadvantages with them, however, the greatest of which he had found to be that more men were needed to secure the hay when dry, than could be profitably

employed while the grass was being cut. He had found that a machine would do the work of six men at a cost of about half that which would be paid to the men.

The Independent Horse Rake was another implement which he considered the greatest improvement that he had seen for thirty years. He had raked with one over stone heaps as high as the axle-tree of the machine, into hollows eight or nine inches deep. They were the only implement that he considered a genuine unmitigated saving.

Mr. SPRAGUE, of Duxbury, defended modern plows. The cattle were much farther from the plow, as formerly made and used, and therefore needed a driver, and the handles of old fashioned plows were much longer than those of modern ones. Modern plows, therefore, do the work much easier; and most farmers are of opinion that one yoke of cattle with a modern plow, will do as much work as two would do with an old fashioned one. The iron part of a modern plow can be renewed for about three dollars, and that, as a matter of economy, is one improvement. In conclusion, Mr. Sprague expressed the opinion that the gentleman from Princeton had utterly failed to show that there had been no improvement in the plow and hoe.

Col. NEWELL, of West Newbury, did not understand the proposition of Mr. Brooks as to hoes, unless he meant that a man must wear out one of each kind every day in order to make the old hoe as profitable as the new one.

As to plows, the mould-boards of modern plows are varied, and adapted to either sandy or clayey land. He was not certain as to the superiority of the Michigan plow. The harrow would sometimes bring the first furrow to the top. The share of those first made was not wide enough. As to the draft of a plow, he was certain that a large one,—Eagle, No. 25, for example—would turn a furrow 7 inches by 12, with as little power as a small plow. He had seen that matter tested by experiments which occupied two days.

He agreed that the *Independent Horse Rake* was a good one. In the use of mowing machines, he had tried oxen, and found them able to mow an acre in an hour, and to do it as well as horses. He had found no difficulty in keeping his men employed throughout the day.

Mr. HARVEY DODGE, of Sutton, was surprised to hear his friend from Essex speak of using a harrow after a Michigan plow. The road-maker uses a harrow to bring the earth to a consistency. The real Michigan plow does its work perfectly. All that is needed after it to smooth the land, is half-a-dozen white birches, put into a straight stick, and drawn over the land, to fit it to sow or mow. Three heavy yokes of oxen are needed on Worcester county land, to draw the Michigan plow.

The *Horse-Rake* he considered among the greatest improvements of the age. No one implement is helping farmers so much. He preferred the revolver. No man has said so many good things by way of suggestion to farmers as the horse-rake has said. It suggests the removal of stones from the surface of the land, and of stone walls which are now used to partition off mowing lots, so as to bring them into one, and thus restore the land to use, which is now occupied by them. And when the land is thus prepared for the horse-rake, it is also prepared for mowing machines. He understood that this rake, though claimed as a Yankee invention, was really the invention of a Congo negro, who whittled out one with a jack-knife.

As to the pitch-fork of old times, we have not bone and muscle enough now to use one such as was used in 1796; and as to the wooden plow, such a one as he could take from his hen-roost, the man could not be found who could push it into the ground. To use one needed severe labor, and practice from boyhood. Holding a breaking-up plow was once spoken of as the most severe kind of labor. But it is not severe labor to put a Michigan plow into the soil to the depth of 11½ inches. He liked to bring up the soil from that depth, and put the worn-out soil underneath. He preferred the earth thus brought up for his compost heap, to any washes he could find on his farm.

Mr. BROOKS again spoke. He wanted some gentleman to give a *reason* why the modern plow run easier than an ancient one—*of the same construction*. The plow with a small angle, and wedge-shaped, will run easier; but it does not do the work well if it is narrow behind. The modern plow does not run any easier than an ancient one, he repeated, because the rubbing surfaces are the same, and it is heavier. It runs as much harder as it is heavier. He had seen no *reason* to show that there has been any improvement in plows. Gentlemen had only made assertions. He again cautioned against buying plows or other farming tools merely on the recommendation of some one man. He once bought a plow for \$15, and a few days after offered to sell it to the maker for \$3, and he would not take it. He paid \$141 for a mowing machine, and could not sell it to the maker for \$40.

Mr. SPRAGUE doubted whether a plow went any easier for being narrow behind, as Mr. Brooks had suggested.

Mr. S. L. PARSONS, of Northampton, said that a plow, "of the same construction," would be the same plow, and, therefore, there was no real comparison between an ancient and a modern plow, by the gentleman from Princeton. He considered the Corn Planter and Fertilizer as one of the most economical and useful implements. A machine costs \$15; and a man and horse can plant from six to eight acres in a day. He did it for several

days in succession last Spring, and sold the machine when he got through for all it cost. He had used a mowing machine three seasons. He cut grass enough for other people, in the first season, to pay for it. The second season he cut 180 acres with it, and would not sell it for \$1000, if he could not get another. One pair of horses, with Ketchum's new machine, will mow as much as two with the old one. Last season he mowed 225 acres at a cost for repairs of \$1.25, or less than a cent an acre. It cost \$100. He found no difficulty in keeping the men, necessary to get the hay in, employed during the rest of the day. The most he had ever cut with a machine in a day, was 12 acres in 6½ hours. The fastest that he had ever mowed with it was in cutting 4 acres in one hour and fifty-seven minutes. The fields in Northampton are smooth and large, sometimes long and narrow, so that the machine can go 160 rods in one direction. He used Ketchum's new mower last year. The crop would vary from one to three tons to the acre. Could cut short, fine grass, or rowen, perfectly well. Last season mowed 60 acres of rowen, at the rate of one acre in 33 minutes and 17 seconds. The maker of the Corn Planter is E. C. Fairchild.

Mr. W. J. BUCKMINSTER added some testimony to the facility with which rowen could be cut with a mower.

General SUTTON, of Salem, had used Ketchum's Machine. It cost \$125. The repairs the first season amounted to two or three dollars; last year, not a cent, and it is now in good order.

Mr. BROOKS preferred Manny's Machine, because it does its work as well, and draws easier.

Mr. BUCKMINSTER spoke of witnessing the working of Manny's Machine in a field of Mr. Porter, in Essex county. Mr. Porter uses both Ketchum's and Manny's, and says that Manny's can be used with two-thirds the power required for Ketchum's.

Mr. WHITNEY, of Ashburnham, spoke of plows, and thought one reason why the modern plow produced less friction than the old one, was because the share was of cast iron instead of wrought iron. On old plows with wooden mould-boards, there used to be strips of iron, which produced friction.

Mr. PARSONS, of Ludlow, thought the discussion of the evening had proved that a plow of modern construction would have run as easy seventy-five years ago as it will now!

Dr. FISHER, of Worcester, thought the principle on which the plow works the land to be wrong, and that some other mode of doing it will yet be invented. The spade operates on the true principle, by loosening all the soil and hardening none.

Mr. BROOKS congratulated himself that the last gentleman was approaching to his own admitting that the plow was not perfect.

For the New England Farmer.

LIGHT WANTED ON WILLOWS.

MR. EDITOR:—A statement is going the rounds of agricultural and other journals, that basket-willow is imported into this country to the amount of five or six millions of dollars worth annually; and recommending the willow crop for general cultivation. In the last volume of the statistics of our Commerce and Navigation, on the 220th page, I find the amount of manufactured willow imported, put down at \$132,658; of unmanufactured, at \$45,459. Is there any other willow imported than that which is published in this volume, by our national Congress? Are these figures reliable? If there is only forty thousand dollars worth of the raw material imported, and if that is a good index of the present demand for willow, will not extensive willow planters, who have gone into the business upon the belief that there is an unlimited demand for it, be greatly disappointed? What is the origin of this six million statement? Is there another Multicaulis speculation in the wind? As you editors know every thing, please enlighten one of

THE PUBLIC.

For the New England Farmer.

MR. S. BROWN:—*Dear Sir*—At your request, I offer the following in reply to the editor of "The Homestead":

Like your correspondent, W. C., I am curious to know who is the author of the statement he refers to. I have seen it in two New York papers—the *N. Y. Weekly Times* and the *N. Y. Tribune*. I had, before receiving your letter, made up my mind to write to the editor of the *N. Y. Weekly Times*, and ask for better evidence that so large a quantity of willow is imported from Europe, as is given by their correspondent, in the words, "from the best data within our reach." I have more than once told Mr. Buckminster, of the *Massachusetts Ploughman*, that there is not over two hundred thousand dollars worth of willow and willow-baskets imported from Europe annually; that the baskets cost considerable more than the willow, and are retailed here at about one-third the price they can possibly be manufactured at. I believe I made a statement in your office, which, in substance, was the same. You will observe that my statement corresponds with that found in the Statistics of U. S. Commerce and Navigation. I did not get my information from that work, but from a careful collection of information from reliable persons, who, like myself, are interested in the manufacture of willow.

In the United States there is used in casing glass bottles and demijohns, and in the manufacture of willow-baskets, not more than \$50,000 worth of willow, of which \$17,000 worth are grown in Delaware, Pennsylvania, New York, Ohio, Rhode Island and Massachusetts. I have no knowledge of any being grown in Vermont for more than three years past. Messrs. Parker and Colby, of Vermont, are spoken of in the article referred to by your correspondent. Mr. Colby is the inventor of a machine for peeling willow, the cost of which is said to be \$200.

To save me the trouble of answering a number of letters, from persons who ask for information in regard to Mr. Parker's plantation and Mr. Colby's plantation and peeling machine, permit me to offer to all who inquire of me, the following:

From letters received by me, from Erastus Parker, and from a relative of Mr. Colby, I conclude that their experience in willow culture is small, and their knowledge of the same very imperfect. I have seen the sketch and description of Mr. Colby's peeling machine, which he has published, and have my doubts of its use for the purpose it is intended, but desire to avoid saying anything that would injure the inventor. When the peeling machine has been used a whole season, and the willow peeled with it has been worked up into baskets, its real value can be properly estimated.

Yours, with respect, JOHN FLEMING.
Sherborn, Mass., Jan. 28, 1856.

For the New England Farmer.

"ENGLISH LAPSTONE POTATOES."

MR. EDITOR:—In the *New England Farmer* of January 26th, I noticed an article with the above title, in which the writer asks others who have tried the variety spoken of, to give the results of their experiments. I am one of that number who bought a few of the "Lapstone Kidney"—as they called them—at a high price, believing the statements that were made concerning them. I bought some of the "Fluke Kidney" at the same time, in regard to which I may have a few words to say at another moment. I planted the "Lapstones" in a field with over sixty other sorts, named varieties and seedlings, in rows three and a half feet apart, hills two feet apart in the row; the manure used was the same throughout the field, a large spoonful of guano to a hill; they were planted about the first of June, hoed twice, and all the weeds kept down. The land was high and loamy, and suffered a little from the drought. The result, on digging, was very unsatisfactory, they were, emphatically, "small potatoes and few in a hill;" the yield was not over half that of the Davis' Seedling, State of Maine, and other first rate sorts, while it was not one third as much as some of the coarser sorts, such as "Jenny Lind," "Rhode Island Seedling," "Bullard's Seedling," &c.

What I did get, I consider fit for nothing but to feed to stock or pigs; they are yellow meated and very strong, and I confess it is more than I can do, to eat such a potato, after being used to the State of Maine, and other good sorts. They rotted with me, a good deal, both before digging, and after being put into the cellar. I consider the variety unworthy of attention, for we have more than twenty local sorts that are infinitely superior. I try all kinds, and hold fast to those that are good. May have more to say on the subject of potatoes at another time.

J. F. C. H.

Newton Centre, Jan. 8th, 1856.

PLANTING FRUIT TREES FOR OTHERS.—The Spaniards have a maxim, that a man is ungrateful to the past generation that planted the trees from which he eats fruit, and deals unjustly towards the next generation, unless he plants the seed, that it may furnish food for those who come after him. Thus, when a son of Spain eats a peach or pear by the road-side, wherever he is, he digs a hole in the ground with his foot, and covers the seed. Consequently, all over Spain, by the road-sides and elsewhere, fruit in great abundance, tempts the taste, and is ever free.

Let this practice be imitated in our country, and the weary wanderer will be blest, and will bless the hand that ministered to his comfort and joy. We are bound to leave the world as good, or better than we found it, and he is a selfish churl, who basks under the shadow, and eats the fruit of trees which other hands have planted, if he will not also plant trees which shall yield fruit to coming generations.—*Home Circle.*

For the New England Farmer.

VENTILATION—PEOPLE OF TAOS.

FRIEND BROWN:—Occasionally I receive your *Monthly Farmer*. The January No. came yesterday; soon as time to light up for evening, I took the paper and "put her through by candle-light," before going to rest.

The reading of Judge French's "How to keep your House Warm," in memory, carried me back with a rush, to the "days of auld Lang Syne," and faithfully daguerreotyped to the mind's eye the old kitchen fire, with its massive andirons, to bear up the fore-stick of the size of a good mill-log, of the heavy shovel and tongs, and stout wooden hand-spike that always, when not in use, occupied their place in the corner by the oven. Then there was the huge rock maple back-log, four feet long, and in girth, the size of a forty gallon whiskey-barrel, that required the strength of the "hired hand" and all the boys of the family to drag in at night on the stout hand-sled. Then there was the high-backed settle he has so graphically described. How many long winter evenings, when a freckled-faced boy, I have sat upon that *dear old settle*, in poring over Shakspear, Hume, Brissot and Smollet's—(I am not sure I've got the names right end foremost)—History of England, Gibbon's Rome, the Spectator, and other standard works. These things, "mind me of departed joys ne'er to return." They, like high-heeled shoes, and hoo—by jingo, I liked to have written "hooped petticoats"—but they have come back again, but no matter, the high-heeled shoes have had their day, and so have the old-fashioned kitchen fire-places. Peace to their ashes!

The Judge has much to say on ventilation; theoretically, we suppose, all very correct. He says "a healthy man requires about *fifty-seven hogsheds* of air in twenty-four hours;" and for the man to retain his health, we suppose he would have us understand, the *fifty-seven hogsheds* of air must be pure.

Now, Mr. Editor, I am not going to have any controversy with my good friend Henry, but I want to tell him a bit of a story, and then ask him a question or two.

The story, I copy from Governor Merriwether's last year's Report to the Commissioner of Indian Affairs. Merriwether is Governor and Superintendent of Indian Affairs in New Mexico, U. S.

The Governor says in his report, "Having visited several pueblos, or villages, and believing that these people differ in some respects from any other Indians to be found on this continent, I beg to be excused for giving a minute description of the pueblo of Taos, which I visited in the month of March last. This pueblo is situated in the valley of Taos, on a small stream which supplies water for irrigation and other purposes, and the number of inhabitants may be set down as something over twelve hundred. On my arrival I found that this Indian

town contained but two dwelling-houses, situated upon opposite sides of the creek, and each sufficiently large to accommodate over six hundred people. They are built of adobes, or sun-dried bricks; each covers an area of about two acres at the foundation, and are five stories high, with but one entrance through the external walls and but one window, and both of these open into the Chief's or Governor's room. After ascending to the height of one story, there is an offset in the walls, and the size of the house is lessened around its entire circumference to the depth of the external tier of rooms, about fifteen feet, and this continues to be the case at the top of each story, until the summit is reached. The tops of these houses are flat, and the offset in the walls at the top of the first story affords a fine terrace or walk, about fifteen feet wide, extending entirely around the building, which would make it, say four hundred yards in length, and the residents of each story have a similar promenade or walk, though lessened in length as you ascend nearer the top. The entrance of these houses is from the top, which is effected by ladders resting on the ground in the first instance; but after ascending to the top of the first story, the ladders intended for the accommodation of those residing in the second story are placed upon the roof of the one below. Each family has its room or rooms partitioned off by walls, of sufficient strength and thickness to sustain the accumulated weight above, and through these partition walls are doors of communication with each room of the house, *but there is no other means of ventilation except through small trap-doors in the roof.* These strange buildings form perfect labyrinths, and as the interior apartments are quite dark, it might be difficult for a stranger to find his way out; *but notwithstanding the want of ventilation, the inmates appear to be quite healthy and vigorous,* and the number of children swarming around was *astonishing.*"

And now, Judge, can you tell us where these six hundred human beings, burrowed in these hives (like so many woodchucks in their winter quarters) obtain their fifty-seven hogsheds of pure air each, every twenty-four hours, and how it is that in these close, unventilated quarters, there are such astonishing numbers of healthy, robust children!

Yours truly,

LEVI BARTLETT.

Warner, N. H., Jan. 22, 1866.

REMARKS.—The *Monthly Farmer* is regularly sent to your address, and has been, for a long time, Who appropriates it? Please inquire.

For the New England Farmer.

THE WEATHER.

That distinguished personage, the oldest inhabitant, scarcely remembers the time when the earth was covered with a body of snow so hard and impenetrable. And so it is all along the coast, from Maine to Carolina. Not only snow, but cold of a respectable character, say from ten to twenty degrees below zero. I remember the famous cold Friday in the winter of 1810-11—when the mercury was down only to seven degrees, and the wind from the north quite piercing—it was thought almost unendurable. Going home from school on that day, my cheeks were so whitened with frost as to make a sensible impression for several days.

My principal purpose in adverting to the weather at this time, is, in confirmation of the views of Mr. J. C. Gray, in his essay on the climate of New England—as deduced from the diaries of Rev. Dr. Smith, of Portland, the venerable Dr. Holyoke, of Salem, and the accurate Mr. Nathaniel Lord, Jr., of Ipswich—forming a continued series of observations from 1760 to 1860, a period of one hundred years. The result of this examination is, that there has been no essential change in our climate;—and that the common remarks implying a change, are not well sustained by the facts. For this reason, I welcomed with joy the drifting snow, on three successive Sabbaths, at the commencement of the year—but I am now quite willing that the snow shall dissolve, and soften the sod beneath. What is to be the effect of the adherence of icicles to the trees—excepting so far as the limbs were broken thereby, I have no conjecture—but do not apprehend any evil consequences. We could afford to sustain some loss, for the gratification of so splendid an illumination, as was seen when the sun fairly shone upon these icicles. I have never witnessed a more splendid display of brilliants, at so little cost.

January 20, 1866.

ESSEX.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 2.

SHEEP.

In my last number, I spoke of the natural soil and climate of the British Islands; and showed that England owed the excellence of her agriculture to other causes than these. I now go on to show how her agriculture is richer than that of any other country, and why it is so.

The most striking feature of English agriculture is the number and quality of its sheep. This strikes even the passing traveller, on the railway. It requires only a glance to see that the sheep of England are larger, in the average, and must give a much greater weight of meat and wool, than those of other countries. This is an extraordinary fact, and leads to astonishing results. The first object of the English farmer is to keep a great many sheep, and for these reasons; because the sheep, of all animals, is the easiest to feed, derives the greatest benefit from the food it consumes, and gives the most active and rich manure for fertilizing the land, and is valuable for two things, its meat and its wool. England has thirty-five millions of sheep on its surface. Scotland, in spite of all her endeavors, can maintain only four millions. Ireland, which, from its pastures, ought to rival England, reckons, at most, only two millions—and this is one of the most striking marks of its inferiority.

But it is the quality of its sheep, as much or more than the number, which distinguishes England. England adheres to this principle in raising sheep—she makes meat the chief object of production in sheep, and considers wool the accessory. Therefore, in her breeds of sheep, she seeks two qualities: *first*, precocity, or animals which may be fattened as early as one year old, and reach their full growth before the end of the second year—considering that, by this single fact, the produce of her flocks would be doubled—and *second*, she seeks a perfection of shape in her breeds, which renders them more fleshy and heavier, for their size, than the breeds of any other country.

See what results follow from these two principles. Formerly, the English sheep were not fit for the butcher until about four or five years old; and in France, now, the French sheep are not considered fit for the butcher before this age; but the improved breeds of England are now fit for the butcher at from one to two years old. Has not England doubled by this precocity of her breeds, the produce of her flocks without doubling her numbers? But the English sheep are now not only more precocious than formerly, so that the farmer can send two or three to market, where he formerly sent one; but they are broader, rounder, and have a greater development of those parts which give most flesh. This follows—that the ten million sheep annually slaughtered in England yield an average weight of eighty pounds of net meat; and though nearly the same number are annually slaughtered in France, they yield an average weight of only forty pounds of net meat. But this is not all. While the English farmer aims, principally, at the production of meat in raising sheep, such is the greater size and development of the English sheep, that the clip of wool, from each sheep in England, is fifty per cent. greater in weight than the clip of each sheep in France.

I stated above the number of sheep in England to be thirty-five millions. Therefore, England feeds two sheep on every five acres of her land. France, which, of the two large countries of the world is next to England in agriculture, feeds only two-thirds of a sheep on each five acres of her soil. I stated above that the English sheep yielded double the net weight of meat of the French, and fifty per cent. more wool. Is it not probable, then, that the average return of an English sheep farm is seven or eight times greater than a French one?

Now, two questions fairly arise. Can a country have a rich agriculture, which does not have sheep as a part of the live stock of its farms, and a large part? Can a country have a profitable live stock in the sheep on its farms, unless they have a breed of sheep, which is precocious, and early fit for the butcher, and yields a large net weight of meat, as well as a heavy fleece?

A few words now upon the manner in which England became possessed of her present breeds of sheep. The Leicester or Dishley breed she owes to Bakewell; this is the breed of her plains. The Southdowns, which are the sheep of her hills, she owes to John Ellman. The Chievot is a sheep of the mountains, and I do not know to whom she owes its improvement. Bakewell aimed to produce a breed of sheep which should be precocious, or be early fit for the butcher, and yield a large weight of meat, as well as a heavy fleece. And on his farm at Dishley, after many years of labor and experience, he produced the Dishley breed, animals that may be fattened at one year old, and in every case have reached their full growth before the end of the second year; and to this invaluable quality have added a perfection of shape, which renders them more fleshy, and heavier for their size, than any known breed. They give, on an average, one hundred lbs. of meat, net, and sometimes more. Our sheep, I am told, average forty. The means adopted by Bakewell for obtaining such a marvellous result is known to all breeders by the name of *selection*. It consists in choosing individuals of a breed exhibiting in the greatest degree the qualities desired to be perpetuated, and to make use of

such only for reproduction. At the end of a certain number of generations, following the same principle, the points selected in all the reproducers, both male and female, become permanent; and thus the breed is established. This mode of proceeding appears extremely simple; but what is less so, is the choice of those qualities to be reproduced to arrive at the best result. Many breeders mistake these, and, in a measure, work contrary to their desired object. Bakewell deserved his success, and profited by it. He let his rams for one season for the enormous sum of \$50,000. But the wealth he conferred on his country was incalculable. Ellman proceeded on the same principles, which succeeded so well with Backwell, and at the present day the Southdown sheep gives, on an average, eighty to one hundred pounds net mutton. The Southdown has spread widely, and made its way wherever the soil, not rich enough for the Dishley breed, is yet sufficient to provide a proper quantity of winter food, in addition to good summer pasture. It predominates in all districts of lime formation.

The history of the Cheviot sheep is not quite so brilliant as that of the Southdowns and Dishleys. Still the breed is not less valuable than the others. It is a mountainous breed, and its shape is now as perfect as well can be—fattening often now in the second year, and yielding on an average sixty to eighty pounds of excellent meat. Their fleece is white and short. They spend even the winter months on their native mountains, and are seldom sheltered.

These three breeds tend now to absorb all others, and take entire possession of Great Britain. Throughout England, the sheep farmer now seeks either to improve his breed by itself, or by crossing it with others already improved, or else he substitutes one of these breeds for his own—whichever method appears to him most efficacious for increasing precocity and giving roundness of form to his flock.

English agriculture is, then, first of all, rich in its flocks of magnificent sheep. M.

ARE ENGLISH TURNIPS GOOD FOR SHEEP?

MR. EDITOR:—I wish to inquire, through the columns of your paper, if English turnips are good feed for sheep? I have a few sheep of a superior breed, which I wish to raise lambs from the coming spring. I am now giving them turnips, (cut fine,) at the rate of one quart each per day, and some of my neighbors tell me that turnips will kill all the lambs. If you or some of your correspondents will express your views on this particular point, you will greatly oblige A SUBSCRIBER.

New Gloucester, Dec. 21, 1855.

NOTE.—We have fed sheep with English turnips and never knew any harm come to the sheep or lambs either, from them. Probably more lambs die for the want of turnips than from their mothers being fed with them.—*Maine Farmer.*

ANOTHER NOTE.—We agree with you, brother HOLMES. Roots of all kinds are far from being properly appreciated, as feed for stock. Turnips are excellent for sheep, making a most grateful change with their dry food. A variety of roots

they would probably like better. We have fed turnips to sheep through the winter and spring months, for several years, and found that they were economical and appropriate food.

THE MODEL FARMER.

We cheerfully give insertion to the following communication from one of our agricultural subscribers, descriptive of a model farm and farmer in Dracut. We were not aware that there were any such farms or farmers hereabouts, or indeed this side of New York and Ohio.

MR. EDITOR:—Perhaps it may not be known to the numerous readers of your widely circulated journal, that the largest and most extensive cultivator of the soil in this county is a resident of the ancient town of Dracut. Capt. Nathaniel Fox is one of the largest farmers in the State, and the largest in old Middlesex. He is the owner of nearly nine hundred acres of land, a large proportion consisting of field and pasture. He employs from six to eight men in the winter, the rest of the year from twelve to fifteen, with an addition of eight or ten through the hay season. I will give as near as may be the amount of some of the principal products of his farm. He raises upon an average some two thousand bushels of potatoes, fifteen hundred do. of roots, eight hundred do. of corn, and of other kinds of grain about eight hundred bushels; one hundred barrels of cider, and five hundred do. of winter apples. Under the skilful management of the Capt. (for, by the way, he takes charge in person of all his farming operations,) the increased productiveness of his farm has forced him to enlarge his store-room, although he already has three good-sized barns and several out-buildings. The past year he has put up a large granary, and the largest barn in the country, at a cost of over four thousand dollars. It is built of the best material, and in the most workmanlike manner; it is one hundred feet long, forty-six wide, and twenty-two and one half feet posts; height at ridge-pole forty-four feet; it sets over a cellar ten feet deep, and the wall is built of split stone. He keeps four horses, six oxen, and over seventy cows, which he intends to increase to one hundred; the milk is carried to the Lowell market. From this source alone he realizes over five thousand dollars a year.—*Lowell Courier.*

Well, we should like to see the Capt. and the farm, too.—*Ed. N. E. Farmer.*

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—At the farmers' meeting, last week, a gentleman, (a member of the upper House, I believe,) argued that *mowing machines* could not be advantageously used in his region, because, where the best grass grew, the surface was so uneven; and any attempt to level it and make it smooth and fit for the use of the mower, would disclose too many stones. Perhaps there may be a few fields in the central part of the State, just reclaimed from their forest condition, where this is true. Such fields bear a very small proportion to all the lands to be mowed. Take, for instance, the thousands of acres of interval land, on the borders of the Con-

necticut and its tributary streams; take the other thousands of acres of salt marsh on the shores of the ocean; take the many thousands of acres of fresh meadows—on all these, abundant opportunity will be found for the use of such machines. Merely because this gentleman's premises are so situated that he cannot use them, is no good reason why others should not. I was greatly astonished, to hear an eminent farmer from Worcester county say, that he was confident mowers could not be used on half the farms in the Commonwealth. He did not pretend to say they could not be used on his farm, for he admitted, that he had tried every kind that he had heard of, and they had worked well with him. If they had *worked well* with him, why may they not be made to work as well with others? I think the gentleman was a little too much inclined to the opposite in the ground he took; because others had put them forward with approbation. If I have the right idea of that gentleman as a farmer, he will be among the last to discard the use of *faithfully built and well managed mowing machines*. I am clearly of the opinion that our farmers are about to find in these implements, the best means of *labor-saving* they have ever experienced.

P.

January 25, 1886.

FOURTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY E. H. ROCKWELL.

The fourth regular meeting of the Legislative Agricultural Society was held on Tuesday evening, in the Hall of the House of Representatives. The number in attendance was respectable, though not quite equal to that at the last meeting. The subject for discussion was *Manures, and their preparation*. At 20 minutes after 7 o'clock, the meeting was called to order by Dr. FISHER, of Fitchburg, Chairman of the Executive Committee, who invited Hon. SIMON BROWN to take the chair, who, on doing so, expressed his gratification that there was a more general desire to find something to be used on farms as fertilizers, that would enable farmers to reap larger crops. The attention of scientific men, as well as that of farmers, has been turned to the subject. Guano, lime, bone dust, phosphate of lime and various specifics have been suggested and tried, but they have not always been found to answer the desired purpose. Guano applied to the soil may produce a good crop for one year, and fail to do so the second, and so it is with many other fertilizers. Suppose something could be found which is cheap, and to which all can have access, that would almost invariably result in producing better crops, and it would be thought a great point gained to secure it. He had no doubt such a fertilizer could be found within the reach of all, a fertilizer that could be used without stint, and one which would, at the same time, greatly improve the mechanical condition of the soil, and secure larger crops of all kinds.

That substance lies near almost every farm in the

commonwealth, and is nothing more nor less than the meadow muck, sometimes called *humus*, and sometimes *geine*; but best known as swamp or peat muck.

The material of which this muck is composed was stated to be mosses, coarse grass, leaves, aquatic plants, and even branches and trunks of trees gone to decay, and of the fine mould and mineral matter which has been washed down from the hills in the vicinity.

The effect of this muck on heavy lands is to make them lighter, and being black, it attracts and absorbs heat and makes cold lands warmer. Then it contains nearly all the salts which cow dung does, and is worth nearly as much as the fresh droppings of the stalls and the farm. When piled up in heaps it will not ferment and rot as cow dung does, because it does not contain ammonia, as that does; or if it does, it is in an inert state, and does not act on the compost heap. But that fermentation may be readily brought about by either potash, soda ash, or house ashes. Either of them will cause ammonia to be evolved, and then the heap becomes exceedingly valuable. It not only attracts heat, but it cools rapidly, so that after a hot summer day, when a great amount of heat has been attracted and absorbed by rapid cooling, moisture is deposited, and thus the plants have the benefit of that moisture.

It should not be used immediately upon being dug, but it is a good practice to take it from the swamp in the autumn or winter and let it remain in heaps, of the depth of a foot or more until the next spring before it is spread upon the soil. It is well to mix salt and lime or potash with it, putting 30 pounds of potash to a cord; or 15 or 20 pounds of soda ash; or 8 or 10 bushels of house ashes. This, overhauled once or twice and thoroughly mixed and pulverized, will make one of the best possible manures for any farm. He believed with Dr. Dana, "that in whatever view we regard peat muck, it is the basis on which rests the whole art of agriculture. It is this which causes the great difference of physical characters. The chemical characters are uniform. If, then, *geine* (or peat muck) is the soul of fertility, if it makes soil hot, cold, wet, dry, heavy or light, the proportion and state in which it exists in soil becomes an agricultural problem of the highest value."

Mr. BROWN then closed with expressing the hope that gentlemen present would freely give the results of their experience and observation on the general subject of manures and their application.

Mr. DODGE, of Sutton, regarded the subject of manures as of the first importance. He thought that there was scarcely a farmer in the State who did not lose manure from his barn-yard, or neglect to save it, to the value of \$5 every year; and if each one lost as much from not saving from his

hog-pen and from about the house, the total loss in the State would be at least \$300,000 a year. He thought there was some doubt whether composts were important for making manures. He did, however, use subsoil carted in the fall, to mix with his barn-yard manure, with which he threw in corn butts and other refuse matter, which remains thus mixed till May. He used plaster of Paris and salt, turned on in a liquid state, so as to saturate the whole heap with it. The heap is kept till September, the droppings of the cows being added every day. The plaster is put in to preserve the ammonia, and he found the salt was useful on his land, which, as he expressed it, was hungry for salt. The principal reason for using salt, however, was, that it killed the weed seed. After all, he was in doubt whether the doctrine of composting manures was good. He would like to concentrate his manures as much as possible. There was a great deal of labor required to cart into the yard, muck or subsoil, and then to cart it back again on to the land.

Mr. DODGE stated the result of an experiment that he made in feeding a pair of twin steers for a premium. He tied them in a stable, and the litter used, as well as all the liquid manure, was saved in his barn cellar, and the whole manure was weighed and measured. Ninety-three solid bushels of manure were made in eight weeks from three tons of hay fed to them. He thought the liquid manure from the stables, worth about four-fifths as much as the solid manure.

The chairman suggested that there was little certain knowledge as to the fermentation of manure, and there was a difference of opinion as to whether it should be fermented at all, and as to how it should be preserved and how applied.

Mr. WATERS, of Beverly, was then invited to express his views on the general subject, being referred to by the chairman as a man who mows sixty or seventy tons of hay every year with his own hands. [Guiding a machine.—ED.]

He gave an account of his manner of composting manure. He usually got about 200 loads of meadow mud, in the month of August, out of his swamp, which he allowed to remain in a heap during the winter. After cleaning out his barn-yard in the spring, he spread it to the depth of eight or ten inches over it and under the sheds. The yard is made lowest in the middle to catch the water and hold it. His hogs were allowed to root over the yard in the day time, and the cows were kept in it at night. In the autumn it is brought up into a heap. Sometimes gypsum is thrown into the heap when it ferments. This method of making manure was a great deal of trouble, and he had hoped some more profitable fertilizer could be found; but at present he knew of none that would take the place of this kind of manure; and to be

successful cultivators they must do this. He agreed that much was lost every year by not saving manure, probably half a million of dollars, in the state.

Mr. HOWARD, editor of the *Boston Cultivator*, added his testimony to the value of swamp muck. There is a difference of opinion on the subject, which is probably owing to the difference in the article which goes by that name. It varies in its composition, as it is derived from quite different sources. He had seen that, which spread upon the land, precisely as it was taken from its bed, produced as good an effect as the same quantity of barn-yard manure would have done. This muck was taken from a narrow basin in a piece of woods, the growth of which was rock maple, with some chestnut and oak. This basin was simply a receptacle for decayed leaves and the debris of the rock which had washed down into it.

Some muck is formed from moss, one of the simplest vegetables, and, like other aquatic vegetables, it contains little fertilizing matter. This muck is mixed with the resinous matter and some substances from the trees which grow upon it, such as the cedar, spruce, hemlock or American larch. They contain tannin, which is wholly insoluble, which is imparted to the muck.

Dr. Dana says that muck needs only potash to make it almost similar to cow dung. The potash tends to neutralize the acid and resinous matter, and opens the way by which the oxygen can dissolve that matter. But generally, perhaps, it is better to compost muck. As an absorbent of urine, muck is one of the best substances, because the ammonia which is evolved, is the article most needed to bring it into such a state that its properties can be appropriated by plants.

The manner of composting is a distinct subject. The application of chemistry to agriculture, even if what is called the mineral manure theory, is thrown out, has been of great use by settling the question that the leading value of all manures is the ammonia which they contain. So obvious is that idea, that in some instances the amount of ammonia has been taken as the criterion of value. The question then arises whether ammonia can be excited without fermentation, and whether fermentation can be produced without composting.

The leading object with farmers should be to save all their manures. The value of guano as to its ultimate results, rests still in doubt. The experience of this country does not yet prove what its results will be, when used with other manures. We can draw no inferences from its use in England, because many other substances are used in connection with it there.

In answer to a question put by the chairman, Mr. HOWARD said there might be some doubt as to whether the manures should be piled up and fermentation produced before applying them to

the soil, or whether they should be applied to the land, and plowed in, so that fermentation might take place in the soil. In either case, it is probable that different kinds of fermentation would result. In the latter case, the fermentation would not be active, and would not evolve ammonia. It is a question whether ammonia or nitric acid is the best form in which nitrogen can be applied to plants. If ammonia is the best, the process which produces it is to be preferred. There might be danger that if manures were plowed in before fermentation took place they would work down to so great a depth that they would lose their utility to plants. He did not consider the question well settled, though it is an important one.

Mr. HALL, of Bradford, was called on next, but he said he had never used muck to any great extent because it was not found in his vicinity. He had however seen its effects in a nursery on high and dry ground, and never saw so handsome apple trees of two years growth as he saw there. About four inches of meadow muck were put at the bottom of the trenches in which the trees were set out. He then referred to another application of muck where it is used about some young trees on setting them out, and by which every tree was killed. This shows the difference in different kinds of muck.

Mr. DORGE again spoke, expressing the hope that something might be found to hold the ammonia. He had used saw-dust. He did not think old garden soil worth the expense of moving it to the compost heap or into the barn-yard.

He hoped more attention would be given to saving liquid manures. He then stated how a friend of his in Berkshire was saving all the manure from 800 sheep by box feeding. He believed he had not overstated the amount lost in the commonwealth every year, by not saving manure. He claimed also that farming had absolutely run down this side of the Connecticut river, and is not in as good a state now as it was twenty-five years ago.

The value of subsoil as an absorbent was questioned by Mr. HALL. Mr. DODGE replied that he had tested it, and he knew nothing better for the purpose. He had tried it where lime would not stop the offensive smell of a yard where beef cattle were butchered, and it succeeded perfectly well. Perhaps the subsoil of Worcester county is peculiar in that respect.

Dr. FISHER gave some of his experience on the subject of saving manures. Before he commenced he made himself familiar with the literature on the subject, and then built a barn with a cellar cemented on the bottom and sides so as to be entirely water-tight, having a capacity of about 15,000 gallons. Over this the floor upon which the cattle stand is placed, having about four feet of the width of the floor, where the hind feet of the cattle stand, made of oak and scantling, with spaces of an inch

and three-fourths between them, through which all the solid and liquid manure may drop into the cellar. The cattle stand upon this with no bedding, the place where their fore feet are, being always dry and clean. The sink drain from the house runs to this cellar, and water from the roof of the barn and sheds, so that the manure in the cellar is always covered with liquid. The cattle are kept stalled, throughout the year, except that the cows are let out for exercise, and the horses for use. This liquid manure is pumped out, by a chain pump, and carried off in a box which holds a hundred gallons. This box can be filled and carried thirty rods and spread upon grass ground in fifteen minutes.

He considered the liquid worth as much as the same quantity of solid manure. The liquid manure may be applied to vines and trees at any time in a very diluted state. He would apply it to grass in the spring and fall, and immediately after cutting off the first crop of grass. As the cattle in the stable stand with their heads some four feet from the openings into the cellar, he had seen no bad effects upon their health; nor could he discover any smell from the cellar. His pigs have a stall where their manure drops into the same cellar, and his fowls,—some 250—have a separate house.

Mr. W. J. BUCKMINSTER suggested that there might be danger in the application of manure in a too concentrated form. He had found liquid manures to make plants grow faster than any other. As ventilation, for the health of animals, was important, he thought it would be better to have the cellar for the manure in a separate building.

Mr. BROWN, the Chairman, suggested that farmers must exercise a sound judgment in the selection and use of manures, and particularly of muck. The farmer has no mathematical rules to guide him, but must be guided by the light of experience, in a great degree. Meadow mud should be hauled in the winter into heaps, where it may freeze so as to kill the bulbous roots of the swamp grasses it contains. As a deodorizer, meadow muck, when dry, is very valuable. There is no substance, excepting charcoal, which is equal to it. He said he expected to see the day when this muck would be sold in Boston, at a high profit, as a deodorizer.

Mr. FREEMAN, of Orleans, stated that the farmers in his vicinity had long been in the habit of using muck in connection with barn-yard manure, and they considered it equal to stable manure.

Mr. BUCKMINSTER remarked that the meadow mud, properly called peat muck, was that only which was good. He considered the other kind useless.

Mr. BROWN said that the best peat muck, appeared, under a microscope, like thousands of needles, which are in fact the fine roots, so fine as not to be seen by the naked eye. That which has sand in it is least valuable.

Mr. DARLING, of Boston, added his testimony to the value of manures which have been long kept housed.

Mr. NYE, of Sandwich, also spoke of the value of the muck obtained in his vicinity, even when applied fresh from the swamp, and without mixture with other manures.

General TOWNE, of Worcester county, could not agree with Mr. DODGE that agriculture had gone backward within the last twenty years. He would not believe it, CERTAINLY, if Mr. Dodge had not said so; but his opinion is the end of the law. He urged the importance of greater punctuality in meeting, and then, at half past 9 o'clock, the meeting adjourned till 7 o'clock next Tuesday evening, at which the same subject will be further discussed.

GIRLS SHOULD LEARN TO KEEP HOUSE.

No young lady can be too well instructed in anything that will affect the comfort of a family. Whatever position in society she may occupy, she needs a practical knowledge of the duties of a house-keeper. She may be placed in such circumstances that it will be unnecessary for her to perform much domestic labor; but on this account she needs no less knowledge than if she was obliged to preside personally over the cooking stove and pantry. Indeed, I have often thought it was more difficult to direct others, and requires more experience, than to do the same work with our own hands.

Mothers are frequently so nice and particular in their domestic arrangements, that they do not like to give up any part of their care to their children. This is a great mistake, for they are often burdened with labor, and need relief. Children should be early taught to make themselves useful—to assist their parents in every way in their power, and consider it a privilege to do so.

Young people cannot realize the importance of a thorough knowledge of housewifery, but those who have suffered the inconveniences and mortifications of ignorance. Children should be early indulged in their disposition to bake and experiment in cooking in various ways. It is often but a troublesome help they afford, still it is a great advantage to them.

I know a little girl, who, at nine years old, made a loaf of bread every week during the winter. Her mother taught her how much yeast and flour to use, and she became an expert baker. Whenever she is disposed to try her skill in making simple cake and pies, she is permitted to do so. She is thus, while amusing herself, learning an important lesson. Her mother calls her "her little housekeeper," and she often permits her to get what is necessary for the table. She hangs the keys by her side, and very musical is their jingling to her ears. I think, before she is out of her teens, upon which she has not yet entered, that she will have some idea how to cook.

Some mothers give their daughters the care of house-keeping, each a week by turns. It seems to me a good arrangement, and a most useful part of their education.

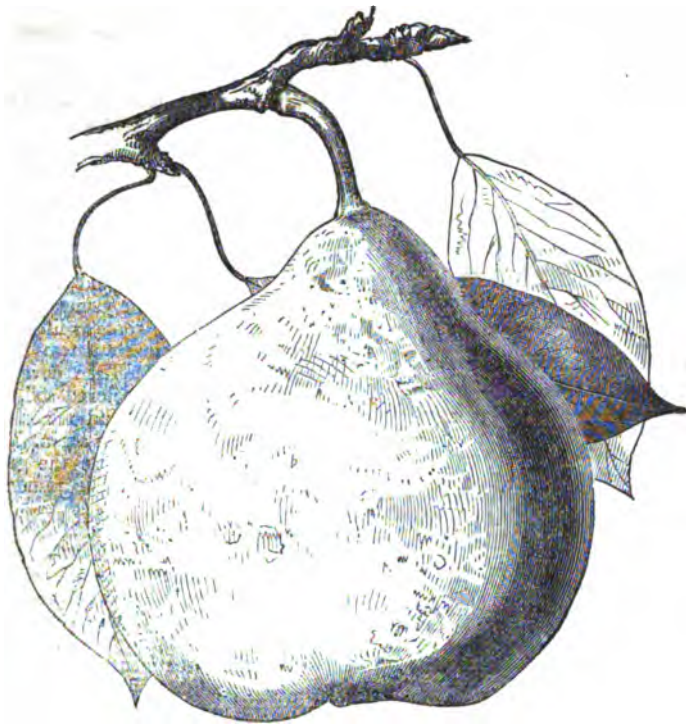
Domestic labor is by no means incompatible with

the highest degree of refinement and mental culture. Many of the most elegant and accomplished women I have known, have looked well to their household duties, and have honored themselves and their husbands by so doing.—*Anon.*

LEGISLATIVE AGRICULTURAL MEETINGS.

We are glad to see this reorganization. It has ever appeared to us that great good might be derived from these meetings if properly conducted. The great difficulty lies in two things. One, that there are always some of those long-winded, everlasting talkers, who occupy a long time in beginning, more in talking, and who, after they have wound off six times, you find just spreading themselves for a speech. The other difficulty is found in the fact, that no one feels that responsibility rests on him, and of course no one prepares himself with facts gathered, condensed and arranged for the occasion. Each one appears to go without definite object, and expects the one who speaks before him, to furnish topics and suggestions for him to corroborate or refute, according as the real or fanciful relation of something he has seen or heard, may, at the moment, dictate. If a portion of the speakers were pledged at the previous meeting, those speakers restricted to 15 minutes, and all others to 10, it would give a life, definiteness and practical value, not often found in the discussion as now conducted. There would be hope, also, that some of the same spirit might be carried into the proceedings of the Legislature, in the sessions during the day. Every auctioneer knows if he would sell high he must sell fast. Bidders soon find it is now or never, competition becomes brisk and good prices are realized. So with discussions. Let a speaker be stopped a few times in the middle of a long yarn, and he will soon accustom himself to commence with his subject, stick to it while he talks, and stop when he gets through; and by so doing give pleasure to all who hear him. There is almost always agricultural talent of the highest order, in attendance at the meetings, talent not connected with the Legislature, and nothing but definiteness of subjects, time and order, is requisite to bringing it out. But if, when raising and preserving apples is the subject, one man taken half an hour on the breed of cattle, because he is a cattle-breeder, and another on sheep because he has sheep to sell, and a third on underdraining, that being his hobby, another on the virtue of guano applied to corn, because he has killed the sweet corn in his garden with it, you will have a meeting too much like many that have been held.—*Culturist and Gazette, Pittsfield.*

AGRICULTURE IN SULLIVAN COUNTY, N. H.—At a recent meeting of the Executive Board of the State Agricultural Society, the Committee on Farms awarded the *first* premium of \$40 to Ezra J. Glidden, Esq., of Unity, for the best cultivated farm in the State; and the *second* premium of \$30 to Ebenezer Pike, of Cornish, for the second best. These awards establish the fact, as we understand it, that "Little Sullivan" stands two degrees ahead of any other county in the matter of first class farms. It is a distinction worth bragging over.—*N. H. Spectator, Newport.*



THE LODGE PEAR.

SMITH'S BORDENAVE OF SOME COLLECTIONS.

This portrait of the Lodge Pear is a good one. The fruit grew in the garden of Col. WILDER, of Dorchester, who not only furnished that in its season, but has kindly sent us the following history and description :

The Lodge pear was brought to notice about twenty years since by the late Col. CARE, of Philadelphia, and was supposed to be a seedling fruit of that vicinity. Within a few years it has been disseminated from Hartford, Conn., as Smith's Bordenave, having been received in an invoice of trees imported from France into that city, either without a name, or one which was subsequently lost. Whatever its origin may have been, it possesses excellent characteristics, and is worthy of extensive cultivation.

Size, rather above medium, three and a half inches long, including stem, by two and a half in diameter ; *form*, acute, pyriform, broad across the middle, some specimens inclining to obovate, outline and surface a little irregular ; *calyx*, small, sunk in moderately deep basin ; *stem*, one inch long, rather stout and curved, sometimes swollen at the base and set without depression ; *color*, dull green,

overcast with a thin coat of russet ; *flesh*, greenish white, very melting and juicy ; *flavor*, rich, vinous, with a distinct high brown beurre aroma ; *maturity*, first of October ; *quality*, very good.

The tree is hardy, but not very vigorous, except when grafted on the leading shoots of old trees. It produces abundant crops, which adhere strongly to the branches during the autumnal gales, and the fruit keeps well for one of its season.

For the New England Farmer.

UPLAND CRANBERRY.

MESSENGERS. EDITORS :—I know that you are interested, and are glad to receive information in regard to any new fruit that may come into use from any section of our country. I have recently had my attention called to an upland cranberry, found on sterile hill-sides and barren, cold lands, near the upper lakes in Canada. Prof. F. Shepard, of New Haven, from whom I gained my information, and from whom I received a sample of the berries, says that he has seen them in great abundance on his exploring expeditions, and that they almost cover the ground in places where but very little vegetable matter can be found, and look beautiful, with their bright flaming red color.

The berries are smaller and more round than the low vine. When prepared for sauce it is not as acid, and has a peculiar rich flavor, and is very highly esteemed by those persons who are able to procure them. The vines are very much like our low cranberries, and yield more abundantly. If they can be introduced into the waste, cold unproductive parts of the United States, they must be very remunerative and valuable to the producer. It is my intention to obtain some of the plants in May of this year, and hope to be able to supply those who wish to try the experiment.

New Haven, Ct.

F. TROWBRIDGE.

EXTRACTS AND REPLIES.

OLD PASTURES—BASKET WILLOW.

MR. EDITOR:—Is it best to plow old pastures that are run out, or let them remain, provided no manure is to be plowed in? (a.) I believe here the majority of farmers are against plowing, but my own judgment leans to the other side. Perhaps Massachusetts men are better able to decide correctly than we, as their farms are much older.

Is there any other variety of the basket willow as profitable to cultivate for market as the *Purpurea*, or bitter purple willow? (b.) Perhaps your correspondent from Sherborn, as he is a manufacturer, can answer this question.

Greenboro', Vt.

BENJAMIN COMINGS.

REMARKS.—(a.) It is doubtful, certainly, whether it is best to go to the expense of plowing old pastures, and re-seeding, without the application of manure. It would be a contest for the mastery between the weeds and grass, in which the former would be quite likely to succeed best. Would it not be better to take an acre, plow, manure and seed it, and as opportunity presents, continue it? In this way what is done, would be well done, and would afford a profit.

(b.) The *Triandra*, *Forbyana* and *Purpurea*, make a complete assortment for basket-makers, supplying all their wants, according to an article on the subject prepared by Mr. Charles Downing. He places the *Purpurea* last, but says it is valuable in all respects as an osier.

HOW TO GET AN ASPARAGUS BED.

MR. EDITOR:—I want to set out an asparagus bed. Will you inform me, through your columns, which time is best, spring or autumn, and how deep it should be set, and how long after planting the seed it should be set out? After it is set out, how many years should it grow before it is fit to cut for use?

Marlboro', 1856.

J. H.

REMARKS.—We cannot do better than to present the following, from the *Rural New-Yorker*, which we find at hand:

THE ASPARAGUS BED.—“How shall I get an asparagus bed?” asks one of our subscribers. We will try and give the information desired.

To begin with the beginning—the seed may be sown in autumn or early in the spring, in a good loamy soil. Select good and ripe berries, put them

in water, and when slightly fermented, the seed can easily be washed from the pulp and dried. One ounce will grow a thousand plants. Sow in drills an inch deep, about one foot apart and cover with fine soil, pressed down lightly. Keep the weeds out, stir the soil often, and thin the plants to six inches apart in the drills. At one year old select the best and thriftiest plants to form your bed.

The asparagus bed should be open to the morning sun. And it is better if protected from the north and east, yet open to light and air. It should be very rich, and on this, more than anything else, depends the amount and value of the product. Dig up a loamy, porous soil two feet deep, intermixing largely and thoroughly with manure to within six inches of the top; this should be filled with garden loam. Then take the young plants from the seed bed—injuring the roots as little as possible—and carefully set out in rows two feet apart, one foot apart in the row. Then cover the bed two inches deep with dark colored soil, made by a mixture of charcoal dust and muck, and sprinkle salt until the surface is white again. This will keep down the weeds and promote the growth of the asparagus, which, it should be remembered, originated on the sea-shore.

In autumn remove the dead stalks and cover the bed three inches deep with stable manure, to be forked in the spring, with another dressing of salt. Let the stalks grow the first and second year without cutting, that the roots may get well established; the third year the asparagus will be fit to cut, and will, with similar treatment each fall and spring—with perhaps a slight addition of earth to prevent the roots from coming too near the surface—continue to yield well for many years.

Remember, room, a rich, warm soil, moist, but well drained, and salt enough to prevent the growth of weeds, are peculiarly beneficial to the asparagus plant. With these, and good care, one cannot fail to have that inmate of all good gardens, an asparagus bed.

FINE YIELD OF POTATOES.

MR. EDITOR:—Noticing in your valuable paper a report of a large yield of potatoes, by friends Knowlton and Cross, I will give you my success in raising the same kind, (the *Jenny Lind*), in the rocky town of Shelburne. The past season I have dug from eleven rows, eleven rods long, (about twenty-two rods of land,) *seventy-five bushels of potatoes*. Although I did not weigh any of them, yet I think I might have weighed some which would fully equal Ashfield “whoppers.”

Shelburne, Jan. 7, 1856.

REUBEN NIMS.

TIME TO CUT TIMBER—WILLOW FOR FENCES.

I wish to inquire the right time to cut timber and not have it powder post? Is the basket willow good for fencing? Has any one tried it, so as to know how it ought to be managed between pastures, or between pasture and meadow? What length of time, and what kind of willow is the best? What distance apart, and what kind of land is the best? How many years before it will make a permanent fence, or will they be always browsed so that they are not of any value. If you, or any one of your subscribers, will give light on these questions, you will do a favor to many of your subscribers.

A. B.

Salisbury, Vt.

PLOWING AND MANURING ORCHARDS—CANADA THISTLES.

MR. EDITOR :—I wish to have your judgment as to the best manure for me to use upon an orchard which I propose to plow in the spring. There are some 2½ acres, of a clayey loam soil, gently undulating, with a slight northwestern inclination.

It was planted about 7 years since, and has had, I judge, about an equal share of cultivation and neglect since—the owner having gone west four years since.

It came into my possession last spring, and I find that the last summer, though the trees seem to thrive, and for the second appearance of fruit, did well, yet the weeds and grass had a strife for possession, in which the grass came out second best. The weeds most numerous and troublesome are the white daisy, and a large, coarse weed, with yellow blossoms, called by some, John's-wort.

Now the question is, as to using stable manure, ashes, lime, poudrette, super-phosphate, &c., &c., either singly or mixed, and if it is best to give a heavy dressing this year, or moderately for two or three years to come?

Is there any better way to cure Canada thistles than to salt them?

D. F. M.

REMARKS.—Cover your orchard land well with stable manure, and plow it in, but plow with great care, or you will injure the roots. After plowing, apply ten bushels of ashes to the acre, and harrow it in, and your trees will "drop fatness," after the roots have got fairly hold of such dressing.

Cut the Canada thistle when in blossom, and when dry burn them where they grew. Apply brush and other rubbish, if you have it at hand. But plowing and cultivating is best.

ACCIDENTS AND DISEASES OF CATTLE.

MR. EDITOR :—Ten years ago next April I had a cow burst so badly that she grew poor and weak; for seven or eight days I could get no one to relieve her, when she failed so rapidly as soon not to be able to rise alone. With the aid of a farrier I then cut through the skin a slit about eight inches long, and put back the small intestines, which were all down in the skin in front of her bag. We closed up the skin with a strong waxed thread, and she gradually recovered and brought a calf the next spring, and so on for seven years in succession, when I fattened her.

In reply to some inquiries about the horn ail, I would say that I cured several creatures, so far gone that they could not rise without help, by taking a bag that would hold a quart or more of equal parts of soft soap and fine salt, filling it and tying it on top of the head to each horn. Let it remain several days, and apply another if the cure is not effected.

B. MARTIN.

East Corinth, Vt.

HOW TO PREPARE WHEAT FOR SOWING.

Wash the wheat clean, drain off the water and add two quarts of coarse-fine salt to a bushel. Let it stand from 24 hours to a week, and stir it occasionally. When ready to sow, drain off the brine, spread the wheat on the barn-floor and sprinkle it with slaked lime until it is in condition to be scat-

tered in sowing easily. I never knew smut or the weevil to attack wheat prepared in this manner.

Dublin, N. H., 1856.

JOSEPHUS SNOW.

ABOUT MIXING MANURES.

MR. EDITOR :—As this is a good time to draw out manure, will you please tell me, through your paper, which is the best to put into my heap, plaster or muriate of lime? It may be, some of your readers have tried both, and can tell from experience.

Milford, Jan., 1856.

L. A.

REMARKS.—We would not advise either. Haul out the manure, pile it up snugly, and cover it with old muck, if you have it. In the spring, after you have dressed your land with this manure, then, on a portion of it apply the muriate of lime, and on another portion apply the plaster. Keep an exact account of the transaction, and through the summer note the appearance of the crop, and in the autumn, the result.

You will find this course more satisfactory than by mixing all your fertilizers in a promiscuous heap.

WHAT IS THE EFFECT OF BONE MEAL?

MR. EDITOR :—Will you have the goodness through your valuable paper to tell me the properties and effect of bone meal upon cattle and fowls, and how often, and what quantities, should be given?

A SUBSCRIBER.

Nashua, Jan., 1856.

REMARKS.—When "A Subscriber" remembers that in every one hundred pounds of the bones of his cows, there is *fifty-five and a half pounds* of phosphate of lime, and then remembers that those bones are principally drawn from his pastures and fields, he will become satisfied that long and constant cropping must exhaust that substance. The term, phosphor, is from two Greek words which mean "to shine," "to bring," that is, to bring light, because when exposed to the air it smokes, shines in the dark, takes fire by mere rubbing, and burns with a large bright flame. *Phosphorus*, in chemistry, is a combustible substance, of a yellow color, and resembling fine wax. It exists in all animals and plants, though in comparatively small quantities. *Phosphoric acid* is obtained by burning a piece of phosphorus under a glass, where the white fumes of acid will condense on the cool inside of the vessel in the form of a white powder, which speedily absorbs moisture from the air, and runs to a liquid. This liquid is called *phosphoric acid*, and is very sour and corrosive. It combines with potash, lime, &c., and then makes what we call a *phosphate*, that is, the *phosphate of lime*, &c., and the bones of animals contain a large proportion of this acid, chiefly in combination with lime and magnesia.

After long-continued cropping of fields and pastures, without returning much manure, this sub-

stance is exhausted, the cattle do not obtain a sufficient quantity of bone-making material, and consequently sicken, and sometimes die. Young children, fed principally upon arrow-root, and other edibles which are nearly pure starch, often suffer exceedingly for the want of the proper bone-making substances.

We think "A Subscriber" will now clearly see what are the "properties and effects of bone meal upon cattle." Give it as often, and in quantities as much, as the creature will eat in an unmixed state; or, it may occasionally be mixed with a little meal, or sprinkled upon wet hay. We are always happy to find the attention of the reader turned to such points—they are of importance to the farmer.

HOT-BEDS—EARLY BEET AND CABBAGE—SWEET POTATO SLIPS.

MR. EDITOR:—I am one of the constant readers of the *N. E. Farmer*, and I want to make a few inquiries through its columns. I want to start some vegetables under glass, and my sashes will cover about forty square feet. How shall I build the frame? How deep must the manure be? (a.) What is the earliest beet and cabbage? (b.) Can I find sweet potatoes in the market at a suitable time for starting slips? how early must they be planted? (c.)

Hanson, Jan., 1856.

REMARKS.—(a.) The following description of a hot-bed, from "Bridgman's Gardener's Assistant," will be in point:

Some gardeners make their beds on the level ground, but it is always safest to make them in pits from eighteen inches to two feet deep; in order to do this, the pits should be dug in autumn, or a heap of dung may be deposited on the ground intended for the beds before the frost sets in, and good earth may be obtained from the pits without difficulty.

The frames should be made of good sound planks; the back plank may be two feet wide, and the end ones may be so sloped as to make fifteen-inch plank do for the front. A frame calculated for four sashes, of three feet in width by six in length, as above described, should be nearly thirteen feet long, and about six broad at the top.

The frame being set over the pit, and properly fastened, the fresh dung should be spread regularly in the pit to the depth of twenty to twenty-four inches; if the dung be in a good heating condition, cover it six or eight inches deep with mould, then lay on the sashes, and protect the beds from the inclemency of the weather. In two or three days the rank steam will pass off; it will then be necessary to stir the mould before the seed be sown, to prevent the growth of young weeds that may be germinating; then sow the seed either in shallow drills or broad-cast, as equally as possible, reserving a small quantity of the warm mould to be sown lightly over the seed.

(b.) The Bassano beet and early York cabbage are considered the earliest.

(c.) Sweet potato slips are usually sold by Messrs. Rand & Darling, Quincy Market, about the season for setting,—first of June.

GRAY LIME AND WHITE—CHARCOAL.

I wish to ask the following questions of you, or some of your able correspondents:

Is gray lime as good for farming purposes as the white? I mean as a manure.

What sort of soil is most benefited by charcoal? and is coal made from hemlock, or other soft wood, as good as that made from hard wood, as a fertilizer, and what is the best way to apply it? to keep it on, or near the top of the soil, or bury it in deep.

Jan., 1856.

C. W.

A SMALL AND CHEAP SUMMER-HOUSE.

MR. EDITOR:—Will you give us a plan for a small and cheap summer-house, upon which vines may run, and in an unpretending garden; and dimensions of lumber for the same.

Yarmouth, Maine, 1856.

O. A. HILL.

REMARKS.—Such a summer-house is a beautiful feature in a garden, and we hope some of our correspondents will tell us how it should be constructed.

HOW TO TELL GOOD EGGS.

MR. BROWN:—In a good egg the small end is always cold, and the big end warm. They can be tested by touching the tongue to the small end, and then to the large end; any one can observe the difference.

W. R. S.

Petersburgh, Jan. 14, 1856.

For the *New England Farmer*.

ON RAISING STOCK.

Having had considerable experience in the raising of stock, I wish to state through the columns of the *Farmer*, a few facts connected with it. There is a mistaken idea prevalent among many farmers, that if a creature is fed high while young, it will naturally be tender, and must so be fed through life to be kept in good condition. A thing that is worth doing at all, is worth well doing; if farmers would have fine, well proportioned cattle, they must be well cared for during their first years, and this is the main point; if a calf is kept growing all of the time the first year, the probability is that it will make a fine creature, if it have enough even of poor hay to eat. My method of raising calves is this; let them suck one-half the cow gives for four or five weeks, keeping fine hay before them, and giving them, once a day, a handful of meal or oats, or a few crusts of bread soaked in water, then learn them to drink porridge made of skim milk and buckwheat flour, or meal that has been sifted. In this way they seldom scour at all; and if one does, I take a little white pine charcoal, finely pulverized, and mixed with lard enough to make it adhere, spread this mixture on a piece of bread, and give it, which is a certain cure. I feed in this way until they are three months old, when they will do to wean. A few oats should be given once a day a while longer. During the first winter they should be kept in a warm stable, and have all the good hay they will eat; after this they will grow well and keep in good condition on meadow hay. In this way it is no uncommon thing for my three years old steers to weigh 3,000 lbs.

And what is true of calves, is true of colts in a

greater degree, as it is the symmetry of form, and gracefulness of movement in the horse, in which consists his highest value. If the colt is allowed to become stunted while young, all the high keeping that can be given in after life never can restore that which he has lost. I have known a man who wished to raise up a tough horse for his own use, who kept his colt in an open shed, with nothing but poor hay to eat, and it was tough indeed; tough to look at, tough to drive, and a sorry looking thing altogether. A colt should be kept in a warm stable, with plenty of good hay, a pint of oats and a pint of sliced carrots a day, during the first winter, and here I would say, that I consider grooming of as much importance as good keeping; farmers, as a general thing, pay too little attention to this; a good rubbing from head to foot, once a day, is worth as much to a horse as two quarts of oats. If farmers would keep three things in view, in regard to young animals, we should soon see a great improvement in the stock of New England, which are these—feed, feed well, feed high. A. F.

West Brookfield, 1856.

REMARKS.—Capital suggestions—and as true as they are capital. Hope to hear from A. F. again.

For the New England Farmer.

HORSE RACING AT CATTLE SHOWS.

MR. EDITOR:—Can you tell us how it happens that within a year or two, the time at our cattle shows, instead of being devoted to the legitimate objects of such gatherings, is devoted to horse-racing? And not not only that, but a large part of the money raised and set aside for prizes, given for the best specimens of female equestrianism? Is it possible, that, in this enlightened age, we are willing to sustain horse-racing, with all its attendant evils too numerous to mention? that which our good fathers and mothers have labored to warn us against, and to shun as the places where vice and immorality did abound. This practice has been discountenanced by the good and moral for ages; and now, that it presents itself in a new form, under the name of cattle shows, thousands, both old and young, are in attendance; the grey headed, who ought to be too wise to be seen there, and the young and thoughtless, who drink in the excitement of the hour, with all the evil they see and hear, as they would the most luscious sweets. Horse-racing has become the most important part of the performances, beside which, an able and well delivered address would be called poor and insipid, and not worth listening too.

It is said by way of excuse for all this, that it draws a crowd, and it pays, and this is all that can be said in favor of the thing. All very true. So it would draw a crowd and doubtless pay, to have a puppet show, Jim Crow dancers, a circus, or something of that sort, but do you think it would tend to promote the noble art of agriculture? For one, I think otherwise, and am determined to raise my voice against the increasing evil. More than once when I have witnessed the races, I have been led to remark that the ladies would do better to be at home, making bread or butter, or still better, be able to bring a specimen of those articles to the fair, that they might compete for the prizes offered, rather than to show themselves mounted on a fast

horse to run a race that the crowd "that pays" may have an opportunity to gratify a strange curiosity that seems to exist in the breasts of the Yankees.

We might ask the managers of these societies that annually throw away their money on this racing business, this question—are you expending the money committed to your charge in a manner calculated to give permanent satisfaction? And of the members of these societies I would ask, are your officers spending your money as you wish to to have them? Are you willing to have *forty* or *fifty* dollars paid for the best specimen of "horse-womanship," when your wife or daughter receives but *three* or *four* dollars as the highest premium given for the best butter, cheese or bread? No, and I hope the officers of all the agricultural societies will consider well what they are doing before they conclude to give away half or a quarter, or in short, any of the money which is distributed in premiums, to those who can best run or race a horse. Pray remember those who have exerted themselves to raise fruit and vegetables, to make bread, cheese and butter, to bring specimens of their handiwork, that your halls may be filled. And if any person should prefer horse-racing to bread and butter, or fruit, then I say, let him have his fill and live on that as long as he can, for he does not deserve any of the bread or the butter. More at another time.

MIDDLESEX.

Newton Centre, Jan. 15th, 1856.

REMARKS.—There is a diversity of opinion in regard to trotting-courses on our Fair Grounds. We are willing to yield room for a pertinent discussion of the question.

For the New England Farmer.

ABOUT FARM ACCOUNTS.

The neighbors of Shoemaker A. expressed surprise on hearing that he had made a purchase of real estate. It was not so surprising an affair, after all. The observation of A. had learned him that lucky purchases were made in a dull market. He had the money, and thought it would be a safe investment, and having been brought up on a farm—and having a taste for agriculture, the management of a piece of land would be to him a relaxation instead of a care. A.'s purchase consisted of a small farm of twenty acres, "be they more or less," without buildings, they having recently been destroyed; situated within half a mile of his shop and the Post-office. A.'s first step was to hire a surveyor to measure and draw a plan of his land, when he found he had nearly an acre more than he expected, which more than paid the expense.

The trees next became the object of particular attention; they were pruned and washed, and everything done for them that promised to promote their advancement. The labor was all hired, the manure for composting was all bought, the crops were all sold, and accurate accounts kept of the same. What time A. spent in managing and keeping accounts of the land, the agricultural paper, &c., were all charged to real estate.

At the end of three years, the hay crop had been doubled, and all the other crops greatly increased. A. became desirous of changing his residence, and consequently of selling his farm. The farm was advertised in the agricultural paper that

had the greatest circulation in the vicinity, and a purchaser soon appeared to inquire the price, which he informed A. was altogether too high.

Then the value of the accounts A. had kept for his own amusement become manifest. By them he then was able to show that the net income of the farm was ten per cent. on the amount asked. The farm was sold for a handsome advance on the whole cost, which A. thinks, he owes mostly to his accounts. A. thinks the fuller the farmer's accounts of his crops, cost of cultivation, and net income of his farm, the better advantage he has when he wants to sell; the better chance he has of getting a fair price for his farm; and that no farm work pays better than that of keeping as accurate accounts as possible of all farm affairs.

A.'s conclusion is certainly reasonable; is it not worthy of being endorsed and acted upon?

Brookfield, 1856.

YEOMAN.

REMARKS.—Most certainly. The above is a very happy illustration of the value of farm accounts.

CRANBERRY CULTURE.

[FROM THE MIDDLESEX TRANSACTIONS.]

GENTLEMEN:—I see in your advertisement of premiums to be distributed, one for Cranberries, which I hope to obtain; and I refer you for a description of the manner in which I proceeded to raise them, to the Agriculture of Massachusetts, as shown in returns of the Agricultural Societies of 1853, pp. 245, as follows:

"MR. FLINT'S STATEMENT.—In the autumn of 1843, I built a dam and flowed the swamp from that time till August, 1846; then let off the water.

The following October, burnt over the swamp, and set the vines. The vines were cut up with a sharp hoe or shovel, and set in hills, three and a half feet apart; the bunches about the size of a quart measure.

In raising from the seed, I planted in October, 1846, about half an acre; crushing each berry between the thumb and finger, and placing it just under the mud; single berries in a hill, three and a half feet apart. Also, sowed broadcast a number of bushels the following spring. Very few vines appeared from them for two or three years; no berries till 1852, then very small; in 1853, good size, in quantity, worth picking.

My practice has been to stop the water in October, and keep it on till May, or until the weather is warm enough to start vegetation—then lower it down to the top of the vines, and keep it on them until I think the spring frosts are over, then let the vines be fairly out of the water until the berries are grown—say from 10th to 15th August—then draw it off for ripening and picking.

We found three or four small beds of native vines on the swamp, after we let off the water to set the vines, and a few very fine berries; there is now probably a dozen beds that bear berries.

In 1850, we picked seventeen bushels of berries on the swamp; in 1851, twenty-eight bushels; in 1852, ninety-three bushels; in 1853, we estimated them at one hundred and fifty bushels.

In 1852, the native vines produced by estimation, before selling, forty bushels; the transplanted vines, sixty bushels; the increase this year is, principally, from the transplanted vines.

I now give you a statement of the proceeds:

1850, picked 17 bushels, sold 15 $\frac{1}{2}$ bushels for	\$36.20
1851, " 28 " " " 28 " "	70.00
1852, " 98 " " " 98 " "	300.00
1853, " 52 bbls., " 52 bbls., "	380.00
1854, " 47 " " " 47 " "	305.00
1855, " 50 by estimation, probable value	500.00
	—\$1581.00

I learn from the first annual report of the Secretary of the Board of Agriculture, that the cost of preparing land and setting vines is \$1.50 to \$1.87 $\frac{1}{2}$ per rod, which is very extravagant, compared with the manner I have pursued:

The cost of building my dam, by contract,	\$20.00
Ox labor, furnished by myself, estimated,	5.00
Setting vines on about an acre,	25.00
	—\$50.00

The cost of stopping and letting off water, and taking care of the same since 1846, yearly, \$10.00, \$90.00

Reckoning the cranberries for the past six years at six hundred bushels, and the cost of picking and marketing the same at 75 cents per bushel, 450.00

Net profit on \$50 expended in nine years,	\$540.00
Yearly income on \$50,	\$1041.20
	115.87

Respectfully yours, ADDISON FLINT.

North Reading, Sept. 25, 1855.

I hereby certify that the above statement, in regard to the management, the quantity sold, and the amount received, are correct. ISAAC FLINT.

North Reading, Sept. 25, 1855.

REMARKS.—Since the above statement was made, we have learned from Mr. Flint, that he had just fifty barrels of cranberries as his crop of 1855, which he sold for *thirteen dollars* a barrel, delivered at the depot two miles from the house, making the pretty sum of *six hundred and fifty dollars*, as the product of two acres of what was quite recently an almost worthless bog meadow. Mr. Flint also states that in looking about he notices a good many tracts of land apparently as good for the cranberry crop as his, and that some of the pieces might much more readily be flowed and reclaimed than his own.

For the New England Farmer.

ENGLISH LAPSTONE POTATOES.

MESSRS. EDITORS:—Last spring I was induced to purchase a quantity of the above variety of potatoes,—in part by the excellent character given them, and in part by the belief that they were the "old fashioned" Kidney variety, (long since numbered among the "good things of the earth which were.") which had come home in its purity.

My experience justifies its character for early maturity as well as excellence in quality, and was entirely free from disease, as was not the case with all the other varieties cultivated by myself and neighbors. I am now using them as a baking potato, to which mode of cooking their formation is more admirably adapted, presenting great surface and little depth in proportion to size, and in that mode of cooking, think them fully equal to the Lady Finger and Carter.

As a produce, they are far beyond my expectations, from the appearance of the seed, but whether the past season had the effect of inducing irregularity of size, or whether it is peculiar to the vari-

ety, is a problem that farther time must determine, so far as I am concerned. In harvesting, I personally inspected the produce of ten hills, each seeded with a single potato, and the average yield was thirty-four and a fraction, ranging in size from that of a robin's egg to a circumference of 7 to 9 inches, about one-half medium to full size quoted, and remaining half from medium down to the size first mentioned. Of seven varieties which I raise, equally great difference in size prevailed, with the exception of White Chenangoes; they were few in the hill in comparison with all the others, but in size uniformly large, although much affected by the disease. I am of opinion that the variety is worthy of cultivation with a view to general use, not only on account of its early variety, but for its excellent baking qualities. Will not others who produce the the seeds for trial give their experience through your valuable journal?

MIDDLESEX.

Jan. 3d, 1856.

THE OLD HOMESTEAD.

Where'er the happiest time is come
That to the year belongs,
Of uplands bright with harvest gold,
And meadows full of song—
When fields of yet unripened corn,
And daily garnering stores,
Remind the thrifty husbandman
Of ampler thrashing floors—
How pleasant from the din and dust
Of the thoroughfare aloof,
Seems the old-fashioned homestead,
With steep and mossy roof!

When home the woodman plods, with axe
Upon his shoulder swung,
And in the knotted apple tree
Are scythe and sickle hung—
When light the swallows twitter
'Neath the rafters of the shed,
And the table on the ivied porch
With decent care is spread—
The heart is light and freer
Than beats in populous town,
In the old fashioned homestead,
With gables sharp and brown.

When the flowers of summer perish
In the cold and bitter rain,
And the little birds with weary wings
Have gone across the main—
When curls the blue smoke upwards
Up towards the bluer sky,
And cold along the naked hills,
And white the snow-drifts lie—
In tales of love and glory,
Is forgot the cloud and storm,
In the old fashioned homestead,
With hearthstone large and warm.

WHITEWASH FOR OUT-HOUSES AND FENCES.—

Take a clean barrel that will hold water. Put into it half a bushel of quicklime, and slack it by pouring over it boiling water, sufficient to cover it four or five inches deep, and stirring it until slaked. When quite slaked, add two pounds of sulphate of zinc, which may be had at any of the druggists, and one of common salt, which in a few days will cause whitewash to harden on the wood work. Add sufficient water to bring it to the consistency of thick whitewash.

To make the above wash of a pleasant cream color, add 3 lbs. yellow ochre.

For fawn color, add 4 lbs. umber, 1 lb. Indian Red, and 1 lb. lampblack.

For grey or stone color, add 4 lbs. raw umber and 2 lbs. lampblack.

The color may be put on with a common white-wash brush, and will be found much more durable than common whitewash.—*Scientific American.*

For the New England Farmer.

WATERING CATTLE.

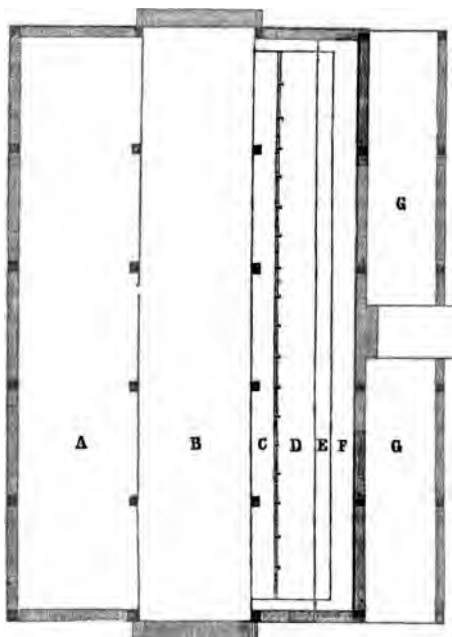
Being under the necessity of going out in this driving storm of snow to see that my stock are watered at the neighboring brooks, has impressed on my mind the loss I am suffering by not having provided water for them in their stalls, or in the barn-yard adjoining. This same brook runs within two hundred feet of the barn, where, at an expense not exceeding \$50, machinery could be placed that by the power of the water itself, would yield a constant supply of pure water for as many cattle as the barn will accommodate. That this is so, I know, because on my neighbor's farm, where he keeps constantly fifty or more cows, and as many oxen, horses, and other animals, as are needed on a large farm, for the last five years, he has obtained all the water they needed, both winter and summer from a small pond in his pasture distant 2500 feet, forced through a lead pipe, by a fall of only 13 feet head—the original cost of the preparation did not exceed \$200. Here then, at an expense not exceeding \$20 a year, is obtained a convenience that is equivalent to the services of one man, and an additional benefit, more than double this saving. Think also of the saving made, in the droppings of the animals, one-half of which would be lost by their roaming abroad, and irretrievably lost, when dropped in and floated away with the stream.—This is no fancy picture; instances of this kind may be seen in every farming village; aye, more, we have known farmers who have boasted of their convenience of watering their cattle at the brooks, or neighboring ponds, as their fathers for a hundred years had done before them. It is perfectly easy to demonstrate, that the loss sustained in fertilizers, by this careless usage, in this period, at a moderate valuation, would exceed the present value of the farm, at a high valuation. So much for heedlessly going on in the steps of those who have been before us, without regard to consequences.

January 1st, 1856. * *

REMARKS.—The above communication is an exceedingly valuable one. It is the notice of such practical, every day wants of the farmer, that gives an agricultural paper much of its value. Water arrangements are generally expensive, we are aware but that should not deter one from making a beginning. We know a good farmer—one of the best—who pumped water forty years, for forty head of cattle per day. Now this would require at least a minute for each animal, twice a day, making eighty minutes, and of very hard work, too. At length after wearing out some dozen pumps, and pretty nearly wearing out himself, he dug a well in the side of a hill twenty-one hundred feet from his barn, put in a half-inch gutta percha pipe, and for several

years past has had the felicity of seeing the water run down hill by its own gravity, and filling his ample troughs to overflowing, where the cattle may slake their thirst at will. It also serves for many other purposes, and all accomplished at a cost of one hundred and fifty dollars.

GROUND PLAN OF A CONVENIENT BARN.



This barn is 38 by 65, on the ground; 20 feet posts, with small ventilator on the roof; two windows in each gable end, of 12 lights each; 4 windows in the stable, of 6 lights each; a long window over the great doors two lights high; all 9 by 12 glass.

The driveway in the centre, 12 feet wide; the entrance door to stable in the centre; entrance to manure shed at each end.

A, bay for hay. *B*, driveway, or barn floor. *C*, is a crib, or stanchion, placed 2 feet 4 inches from the line of driveway. *D*, platform for cows, 4 feet 2 inches, with 2 inches pitch. *E*, trench behind cows, 22 inches wide, and 5 inches deep. *F*, walk back of cows, 3 feet 8 inches wide, with scuttles at suitable distances, with wrought hinges. *G*, manure shed, 7 feet deep, built of wood, 10 feet wide, with a 5 foot entrance in the centre to the stable.

The floor over the driveway should be framed so as to be movable, either 7 feet, 10½, or 14 feet in height, for convenience in storing coarse fodder.

The tie stanchion should lean from the animal at the top, 5 inches in 6 feet in height, and the space between the stanchions at the bottom should be an

inch and a half wider than at the top—say 6½ at top and 8 inches at bottom.

A division wall runs under the crib the whole length of the barn, to divide the manure cellar from the main one under bay and driveway.

The object of a manure shed, in addition to the cellar under the cow stable, is to leave the cellar room free in which to deposit muck and loam, keep it from freezing, and have it convenient to mix with the droppings in the manure shed; also, to keep the evaporations of the manure from ascending to the barn to injure the hay and be breathed by the cattle. Two or three scuttles should be made in the crib through which to drop muck.

Two ventilating pipes should be placed on the outside of the main building, 18 by 12 inches, commencing on the roof of the manure shed, and extending nearly to the eaves of the barn, with cap on top, and opening at three sides.

If the cellar is made tight there should be small windows in opposite sides of the cellar, made to open at pleasure.

MASSACHUSETTS AGRICULTURAL CLUB.

It is well known that we have in this State the old Massachusetts Society for the Promotion of Agriculture, a State Board of Agriculture, and one or more agricultural associations in each county in the State, and a Legislative Agricultural Society, holding its meetings one evening in each week, during the session of the Legislature. It may not be so well known, however, that there is but one in all these associations, open to the public, where any may go in and take a part in the discussions—and these discussions are held in the evening.

The State Board of Agriculture has ample rooms at the State House, where meetings might be held during some convenient hours of the day, and where the people, not only of our own State, but of all the surrounding States, could meet and engage in conversation, discussions, or for the arrangement of any business, having relation to agricultural progress.

We suggest, therefore, the propriety of forming a *Massachusetts Agricultural Club*, and that the State Board of Agriculture be requested to allow it the use of one of its rooms at the State House, where a meeting may be holden, at 12 o'clock, noon, on one day of each week. The Club, of course, to be regularly organized. Such an arrangement would accommodate hundreds who find it entirely inconvenient to attend the *evening* meetings at the State House, and it would afford opportunity for the farmers, gardeners, drovers, and all others to go in and pass an hour or more without much interruption to their business, and without being away from home over night. Who will take up the matter and help it along?

For the New England Farmer.

HOW TO RAISE FOREIGN GRAPES UNDER GLASS.

MR. EDITOR:—My information on the subject of raising foreign grapes under glass, has been derived from observation, the reading of some publications on grape culture, and the experience I have gained by experimenting upon their suggestions. In the first place I will give you the plan of my vinery, and the preparation of the border. The vinery is 34 feet long by 16 wide; the sills are placed upon seven brick piers on a side, rising three feet above the ground, with a span roof, running north and south. The sides are boarded with matched boards up to the sills, and the ends the same on each side of the doors. The rafters are 12 feet long. The sashes two lengths, three of the top ones on the west side slide over the bottom. The ends are also of glass, above the ceiling, three feet from the ground. There are two ventilators about six feet long and eight inches wide, on each side under the sills, which open and shut, and a door at the centre of the north and south ends, all of which can be opened to admit air when necessary.

I have a hydrant at one end of the building, under which I keep a barrel of water standing, and a hose, by which I can water the border and sprinkle the vines in a short time. The border is the length of the building, and 19 feet wide on each side of the walk, which extends through the centre of the house; being 7 feet inside and 12 outside of the building. The soil was removed two and a half feet in depth. The bottom was filled about six inches with oyster shells and small round stones, to prevent the roots from soaking on a wet bottom. The turfs taken from the top of the ground were laid on the shells and stones, then a laying of compost, and then a laying of bones from the slaughter house, mostly cattle's heads, and filled up with a mixture of loam, muck, leached ashes, scraps of old leather, lime, rubbish, bones and manure, raising it about six inches above the ground. As it was placed on a gravelly foundation, I have thought a drain to take off the water unnecessary. Downing says of grape culture, respecting the soil, that "it should be *dry and light, deep and rich.*" Dead carcasses, which are recommended by some writers, I think entirely unnecessary. The cost of the building and border was about four hundred dollars.

The beginning of April, 1853, I planted 24 grape vines, 12 on each side, which I had of Parsons & Co., of Flushing, L. I. There were 11 varieties, but mostly black Hamburg. The roots were well spread out, just outside of the building, and covered with about three inches of soil, and the vines brought in under the ceiling to the inside, and tied to the wires about ten inches from the glass, after the buds began to push. It being important to keep the house and border moist the first part of the season, the inside was watered three or four times a week, and the vines sprinkled almost every day, and the outside was watered near the roots with soap-suds once a week. The most of the vines reached the top of the vinery by the middle of August. The house was opened as the heat began to increase, and shut before sunset. The thermometer, when the weather would allow, was kept between 70° and 80°, and not over 90°, unless the temperature without was higher. After the first

of September, I watered but seldom. The first of December I cut back the cane to within four feet of the ground, and laid them down inside and covered with tan bark. The 2d year, 1854, I uncovered the vines the tenth of April, and opened the house as the season would allow, and after the buds began to push, tied them to the wires. About the first of June they began to show fruit. I pinched off the most of them, and did not allow over three bunches to grow on a vine the first year of bearing, and not more than one cluster on a spur. Watering the border was continued three or four times a week in the morning, but sprinkling the vines was discontinued while the fruit was in blossom. When the fruit was formed, I pinched off the end of the spur an inch beyond the first leaf above the bunch, and kept all the laterals back to within about 12 inches of the cane. When the fruit became the size of a pea, I commenced thinning them out with a pair of sharp pointed scissors, taking the small ones first. This was done twice in the course of two or three weeks, taking about one-half of the number. The first of July and the first of August, I sprinkled two pounds of sulphur each time on the ground in the middle of the day to prevent mildew. When the vines reached the top of the vinery, they were pinched off, but two or three laterals were left to grow a few weeks longer to prevent the buds from bursting. There were about fifty bunches, weighing from ten ounces to one pound. One vine, the syrian, had three bunches weighing from two and a half to three pounds, and some few of the black Hamburgs, over one pound. In seventeen months from the time of planting, some of the bunches were ripe. In the fall I covered the outside border with manure about ten inches thick, to prevent the roots from freezing, and to enrich the border for the next year. The first of December, I cut them off to within eight feet of the ground, washed them with a coat of soft soap and sulphur, laid them down as last year and covered with tan bark.

The third year, 1855. As the season advanced, I opened the house on hot days, and as the season was late, did not uncover the vines until the 18th of April. I washed them with soap-suds, and when the buds began to push, tied them to the wires. The whole border was forked up after removing the manure from the outside, and the inside watered thoroughly from the hydrant and hose, so as to penetrate the depth of the border. It had not been watered for the previous six months. A similar course in the cultivation was pursued as the previous year in regard to watering, airing, thinning out, cutting back the spurs, and stopping when they reached the top of the house, leaving two or three laterals to grow a few weeks longer. Sulphur was scattered over the ground twice as the previous year. I allowed from seven to ten bunches to grow on a vine, but only one on a spur, and had about two hundred bunches of good and well-ripened fruit. I commenced picking the 15th of September, and have had them till the present time, 20th of Nov. The black Hamburg, Royal Muscadine and White Sweet Water have been heavier than last year, some of them weighing from 14 to 20 ounces. The Syrian, on which were seven bunches, weighed from 1½ to 2 pounds each. The danger of overtasking the vines compelled me, though with reluctance, to pluck off more than one-half of the clusters after they had

formed and appeared as likely to ripen as well as the others. The result was, the remaining bunches ripened perfectly, and the vines appear in good condition for another year.

I have thus given you my method of raising foreign grapes, and I should like to have others make the trial for themselves, and prove more successful than I have been. It has taken my personal attention an hour or two almost every day, and in thinning them out it took two or three whole days. The rich fruit obtained the premium of the Horticultural and Agricultural Societies, yet of *itself* has amply compensated me for the trouble and expense. Any one who has a taste for the work, and can spend the time, will find it a pleasant, if not a profitable pursuit, but if he depends on others, unless he has a skilful gardener, will probably meet with but little success. ORRIN SAGE.

Ware, Nov. 20th, 1855.

LOOK TO YOUR BEES.

The want of proper ventilation is scarcely less destructive to bees than the moth. If the hive is moderately close, the continued extreme cold which we have had has probably congealed their breath and the vapors of their bodies into sheets of ice, which now line the inside of the hive. The bees pass into the upper part of the hive, and huddle together over comb well filled with honey, from whence they move away occasionally to feed. Thus they are incased in ice which gradually thaws as the weather moderates and drips upon them or keeps the hive and comb moist so long as to induce mustiness and mould. An examination should be made and this state of things remedied as far as possible. Ventilation is as important—perhaps more so—in winter as in summer, and for the want of it, we have no doubt many swarms annually perish, when the loss is charged to extreme cold.

On examining several swarms the last week in January, we found those in loosely-constructed hives, having cracks about them an eighth of an inch wide, in better condition than those in hives where the corners fitted closely. If the wind does not reach them, nor moisture, they will probably care little for any degree of cold we experience, if they, at the same time, have plenty of honey. At no time this winter have we opened a hive but we found the bees in lively motion and ready to take wing, although standing in an open bee-house. But an occasional examination is necessary to ensure a successful wintering.

CONCORD FARMERS' CLUB.—This club held a public meeting on Thursday evening, Feb. 7. The travelling was bad, and the clouds threatening, so that the attendance was not numerous. Enough were present, however, to go into an animated discussion on the subjects designated—*Root Crops and Ornamental Gardening*. Among the visitors were WM. BUCKMINSTER, Esq., senior Editor of the *Plough-*

man, his son, Associate Editor, and Mr. ABNER HAVEN, of Framingham. They all participated in the discussion, and gave a new interest to the meeting. Full notes of the debate were taken by Mr. PRATT, the Secretary, which we may obtain, perhaps, for publication at a future time.

For the New England Farmer.

MATTERS IN IOWA.

MR. EDITOR:—The weather has been extremely cold in Iowa, for nearly a month past. Frozen potatoes are "thick as blackberries;" though we have but very few frozen apples—for the obvious reason that we have none to freeze. It is no uncommon thing, however, to see frozen hogs, and other creatures, in consequence of the piercing winds and imperfect shelter. I have really pitied the poor cows and hogs, as I have seen them wandering about, bellowing and grunting for a comfortable place to lie down in. But the farmers here seem to think that the south side of a hay-stack is warm enough for any dumb beast; and the poor creatures themselves, if they could speak, might perhaps wonder, as the little boy did, how their neighbors get along, that don't have any hay-stack to stand under. A good warm barn, is really considered, by some, as a mere Yankee notion, not to be imitated in Iowa; at least, as a luxury not to be indulged in. (A large part of the people in this vicinity are from Ohio and Pennsylvania.)

The hogs, both living and dressed, look very differently from your housed and stuffed porkers in Massachusetts. I have hardly seen a fat hog in Iowa; seldom one that weighed over 200 pounds. They run at large most of the year, and often fair poorly. A little stuffing, just before killing, does not make much of them. The mode of killing, too, differs as much from yours, as the mode of raising. There is no *squealing* about it. That interesting noise I have hardly heard in the West. They are shot down, and dead in an instant. Bees also are treated in the same way, instead of being knocked down. The gun is a great institution, out West.

The comparative expenses of living, here, and at the East, differ somewhat from the common notion at the East. In the first place, land has gone up so rapidly, within the last two or three years, that a good farm out here costs about as much as a good one in Massachusetts, I mean one that has been improved, and furnished with comfortable fences and buildings. Fuel is as high as in most parts of Massachusetts; good wood being from \$4 to \$5 per cord. All kinds of dry goods and groceries are from 20 to 50 per cent. higher than in Massachusetts. Furniture, hardware, etc. is from 50 to 100 per cent. higher. Horses and cattle about the same as at the East. The principal things that are lower are pork and grain. I speak of the more thickly settled parts of the West. In places remote from all the privileges of society, it may be slightly different.

Nevertheless, the tide of immigration is unabated. The railroad, lately completed to Iowa City, 60 miles from the Mississippi, is thronged daily, as much as your Eastern roads. Where all the folks come from, is "a wonder unto many"—much more so than where they are all going to. The latter is

no mystery at all, to those who have seen the vast, unbroken prairies, on every side. Please send us some of your best farmers; and many of your most sterling men and women. Yours, &c., M. K. C.
Tipton, Iowa, 1856.

For the New England Farmer.

THE GOLDEN RULE.

AIR:—"Green grow the rushes, O!"

BY THE "PEASANT BARD."

*The Golden Rule 's the rule of rules,
But few there be who follow it;
Have you it not?—have you forgot?
Go buy, beg or borrow it.*

See'st thou within thy brother's eye
The mote, when thine is full of stuff
Enough to take, and easy make
Your Haman long and strong enough!—
The Golden Rule, &c.

Why take advantage of the weak
And simple-minded Josey, O?
Why him deceive, and make believe
A cat-tail is a posey, O?—
The Golden Rule, &c.

Why hold the noses of the poor
Hard down upon the grinding-stone?
Full many flaws have Fortune's laws,
And you may yet be finding one.
The Golden Rule, &c.

O, dweller in the house of glass!
Why wilt you aye be throwing stone?
If one you crack should cast it back,
I tell you what it is—you're done.
The Golden Rule, &c.

We know the human craft is weak,
The sport of Scottle's bellows, Sir;
But let us see if we can't be
Confounded clever fellows, Sir!
The Golden Rule's the rule of rules,
But few there be who follow it;
Have you forgot?—have you it not?
Go buy, beg, or borrow it.

For the New England Farmer.

FLANNEL NEXT TO THE SKIN.

MR. EDITOR:—I like your occasional instructions as to domestic duties—and was particularly pleased with your remarks on the use of flannel next to the skin—and the mode of washing to prevent its fulling. This accords with my own experience in years gone by. But, for two years last past, I have worn a vest made of raw silk next to the skin, with decided comfort and convenience—and like it better than any flannel I ever used, and find it quite as good economy. Two such vests, that cost in the first instance five dollars, I have now worn two years, having them washed about once a fortnight, and they are good vests yet. During this period, I have taken no cold, nor had any sickness that confined me to my house. To be sure, I take care to have a thorough ablution with cold water every morning, and a dry wiping afterwards. If any one can find a better prescription for the preservation of health, I should like to know how it reads.

I do not boast of knowledge in these matters, I only give my own
Feb. 4, 1856. EXPERIENCE.

FIFTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY H. E. ROCKWELL.

The fifth regular meeting of the Legislative Agricultural Society was held on Tuesday evening in the Hall of the House of Representatives.

The subject for discussion was the same as that at the last meeting, "*Manures, and their Application.*"

The meeting was called to order by Dr. FISHER, of Fitchburg, Chairman of the Executive Committee, who invited Mr. E. T. PARSONS, of Ludlow, to act as chairman of the meeting. He said that he regarded the subject which was to be discussed this evening, as at the foundation of all successful farming. He had had little experience in the use of guano or the other concentrated manures. He had been obliged to manufacture his own manures by taking peat, muck, mud, and the earth from under old fences, removed for the purpose, and putting it into compost heaps. He then urged gentlemen present to take up the subject, and to express their views in their own way.

Mr. COOLEY, of Conway, said his practice had been to raise everything he could on his farm, and to feed out upon it everything he raised. He cut brakes and swamp grass, and worked it into manure by using it as litter. He thought it better to apply manure, especially on wet land, before it is fermented; he did not therefore work over his manure much, or allow it to ferment much before applying it.

Dr. REYNOLDS, of Concord, was next called on, who commenced his remarks by speaking of the very great importance of the subject of manures. We need to study vegetable physiology, and apply food or stimulus to their support and growth, as we study human physiology and apply either food or stimulus as we need. It is important, therefore, to know what is food, and what is stimulus merely, and to know how to apply them in due proportion. It is important to understand the difference between a stimulus and a nutriment to plants. We may have a thrifty plant with little seed or grain; and, on the other hand, we may have much grain with small stalks. We need both, and must therefore furnish the material which will produce them.

In most New England soils, *humus* and lime are needed. Our soils are exhausted, by carrying off the humus in crops, without returning to them enough to compensate for it; and it is therefore necessary to supply it artificially. The lime is carried off in the bones and milk of the cows, in large quantities, and both these—the *humus* and the *lime*—should be restored to the land in such a form that they can be taken up by the plants easily. The question arises as to the form in which they shall be applied. This is for experience to determine; and farmers should all make a record of their ex-

periments in regard to the matter until the question is satisfactorily settled. The Germans do not clear their stables during the season; but give their cattle litter. But we cannot use rye straw which costs \$16 per ton, as a litter, because it is too expensive. But rye straw, cut up and wet with hot water, and sprinkled with meal or shorts, is of more value as food than it has generally been considered.

The importance of using peat muck was then spoken of, which may be used to advantage, even if it is of acid quality, by mixing lime or an alkali with it.

Mr. C. L. FLINT, Secretary of the Board of Agriculture, spoke of the importance of understanding the nature of manures so that they may be applied as stimulants, as fertilizers, or as ameliorators. Well rotted manure is an example of a good fertilizer, where immediate results are desired. As a stimulant, lime may be used to call into action certain elements which are dormant in the soil. Coarse barn-yard manures are good as ameliorators where the soil is of a stiff, clayey nature, the effect being to make the soil more light and pliable. Most forms in which guano is applied produce a great deal of ammonia, which stimulates the plants more perhaps, than any other substance. But some plants need phosphates; and there are forms in which the phosphates can be more cheaply procured than that of guano; as from bones. A burned bone is a neutral phosphate of lime, and by applying sulphuric acid to bone dust it becomes soluble, and is easily taken up by plants.

He thought experiments should be made by farmers, to ascertain the money value of each constituent of a compound manure, so that they may know what is the best and cheapest manure for any specific purpose. He would be glad to learn the results of experiments in the use of soda ash.

Mr. J. W. PROCTOR, of Danvers, thought the great practical question for farmers to consider was, whether they can find any material to be used as a manure, that can be as easily, or more easily obtained, and which will do as well as that from the barn-yard and hog-pen. They had been encouraged by chemists to hope for such a substance. He had seen guano applied on grass land with good success. In one instance, where it was applied at the rate of 400 pounds to the acre, it produced more than three tons of hay to the acre, while from the same field where none was applied, less than one ton to the acre was cut.

In another case where it was applied at the rate of 500 pounds to the acre, the grass was not worth cutting, though the land was pretty good. He had not seen the continued application of it. In his own neighborhood they were in the habit of gathering sea weed, kelp, and what they call muscle-bed, which is the mud of the harbor in which are muscles and muscle-shells. From Beverly Harbor

more than a thousand cords are taken every year, and applied to the adjoining fields. It is applied continuously upon land cultivated with onions, with great success. He would not, however, rely upon that alone. The sea-weed mixed with other manures, helps to raise some of their best crops. He fully agreed in the necessity for discriminating between the different kinds of muck and meadow mud. It is used on the town farm in Danvers, where they make three hundred cords of manure, and where they raised a crop of rye last year which sold—grain and straw—so as to net \$45 to the acre, the crop being 30 bushels to the acre.

Hon. DAVID CHOATE, of Essex, inquired of Dr. Reynolds how he could determine when the peat mud was of the acid kind, and therefore needed lime?

Dr. REYNOLDS said, that if a small quantity of muck were mixed with water, and the water allowed to stand, it would have a perceptible acid taste; and generally this was a sufficiently accurate test. Some muck contains sulphuret of iron; and then there is danger in using too much of it.

Mr. CHOATE said he had heard river sand—salt sand—spoken of as being very valuable in combination. One gentleman took ten loads of road-scraping, with five of river-sand, and mixed them together. He then took two bushels from the privy and two from the hen-roost, and put them in a hogshhead, and poured in a quantity of water. He drew off the water and poured upon the heap of sand and road-scrapings, and then filled the hogshhead again. This process was repeated till the virtue of the contents of the hogshhead was exhausted. On applying this to half an acre, wanting nine rods, and cultivating it with cabbages, he obtained as a crop, cabbages which sold in Cape Ann market for \$82.

Mr. CHOATE then referred to a book which he held in his hand, written in 1747, by *Jared Elliot*, in which the author recommends meadow mud as a manure, speaking of it in almost the same terms in which it is now commended.

SIMON BROWN, Editor of *N. E. Farmer*, was called on, who stated, as he did at the last meeting, that he had great confidence in meadow muck; and since the last meeting his confidence had been confirmed by what he had read corroborating his own views, and the opinions of others, uttered here. He then repeated the reasons why he considered it valuable, which he gave at the last meeting; which are,

1. Because it exists in abundance, all over New England, in every neighborhood.
2. Because it is accessible to all—as those not owning meadows may purchase at low rates.
3. Because it contains nearly all the elements of fertility which the plant requires.
4. Because, next to charcoal, it is the best ab-

sorbent, that is, the best preserver of other fertilizers, that we can command.

These points were elucidated.

He thought more should be said as to the *application of manures*, which was a point that had not been sufficiently investigated. *Bulk*, in some instances, is required. He made an experiment by spreading coarse, fresh manure on a piece of land—a dry, sandy knoll. Though manured before, plants did not flourish there. After applying this coarse manure, containing straw, corn-stalks, and coarse grass, in a very wet heavy state, it was plowed in immediately, in the autumn, to the depth of six or eight inches. The land was very porous and light in the spring, and the field was cultivated with parsnips which grew to a very great size, so great, said Mr. Brown, that I think I never saw the bottom of one of them. They would break off at the bottom, they were so long. The doctrine of applying fresh manure is unpopular; but the contrary one is a popular error in many cases. He could show from the best authorities, that much is lost by fermenting manures which are to be applied to heavy lands. If we wish to *force a crop*, the manures must be well rotted and fine, but if we wish to have the manures last two or three years they should be applied at once, in their coarse, unfermented state, and under cover, where they will give off their gases to the surrounding soil. There is much lost constantly, in the yards, by the fermentation of manures. In one instance, a gentleman applied coarse manure upon one part of a piece of land, while upon another part of the same piece he applied manure of the same kind, but fermented. That to which the fermented manure was applied, did best the first year; but for the second, third and fourth, the crops were altogether better where the fresh manures were applied. Mr. Brown then quoted from Johnston's *Elements of Agricultural Chemistry* in confirmation of this doctrine.

"When used coarse, the immediate action of manure is not so perceptible, yet the ultimate benefit to the soil, and to the crop, may be even greater, if not requiring to be forced at one particular season of the year. While it is undergoing fermentation in the farm-yard, or cellar, the straw loses part of its substance—either in the state of gaseous matter, which escapes into the air—or of saline matter, which is washed out in liquid form. Thus, after complete fermentation, the quantity of matter present is really less, and consequently, when added to the soil, though the *immediate* effect upon the crop be greater, the *whole* effect may also be considerably less.

One ton of dry food and straw gives a quantity of farm-yard dung which weighs

When recent.....	46 to 50 lbs.
After 6 weeks.....	40 to 44 lbs.
After 8 weeks.....	38 to 40 lbs.
When half rotted.....	30 to 35 lbs.
When fully rotted.....	20 to 25 lbs.

A part of this loss may, no doubt, be ascribed to the evaporation of a portion of the water of the re-

cent dung; but the larger part is due to an actual escape of the substance of the manure itself. The farmer, therefore, who applies the manure from a given weight of food and straw, in a *fresh state*, adds more to his land than if he first allowed it to become perfectly fermented. Were he to chop his straw, and put it in as it comes fresh from the field, he would add still more; but its action as a manure would be slower, and while it would beneficially open stiff and heavy soils, it would injure others, by rendering them light and porous."

MOSES M. FISKE had found the value of peat or meadow mud to depend altogether on the character of the timber which had previously grown upon the land, or in the vicinity. If the previous growth had been of oak or other hard wood, the muck was good, but where the growth had been of pine or hachmatack, it was comparatively useless, except as an absorbent. He thought one shovel full applied in the hill was worth five spread on the soil and plowed in. He referred to the practice of the late Simon Baker, who, he said, had obtained, by the use of manure which had not been thrown out daily from the stalls, but was left for the cattle to lie upon, a bushel of potatoes from ten hills, while his neighbors were getting only a bushel from twenty-five hills by the use of manures thrown out daily.

Mr. PARSONS, the chairman, then gave his testimony to the value of muck when applied to young trees. He had found it equal in value to compost manure. He used a little of rye straw, cut twice in two, for his cattle, and had no floor to his stalls, and he had found the manure thus made to be very valuable, as the liquids are thus wholly saved.

Mr. DARLING, of Boston, added further testimony to the value of coarse manure when applied to clayey soils. He believed liquid manures to be better for trees than solid.

Dr. REYNOLDS confirmed the view of Mr. DARLING in reference to the application of liquid manures to trees. A good liquid manure might be obtained by having a tank at a distance from the house to receive the drain from the sink, with which other manures might be mixed, or it might be applied to trees or vines with profit without any addition.

W. J. BUCKMINSTER thought more experiments were needed to learn *how* to apply manure properly, and expressed the hope that further suggestions might be made on that particular subject.

At a few minutes after nine o'clock the meeting adjourned to next Tuesday evening, at seven o'clock, when the discussion of the same subject will be resumed.

LOOK TO YOUR PEAR TREES!—Persons cultivating dwarf pears, or other low trees, shrubby or evergreens, must have an eye to them—and a shovel too—when the great body of snow now lying on the ground, begins to thaw. It will settle about the tender twigs during the day, and freeze

them at night, but the earth being warm and the process of thawing and settling still going on, will drag down the smaller branches and break them off where they unite with the main stem. So it will be with raspberry and blackberry canes, and even currant and gooseberry bushes.

As soon therefore as a thaw commences, the snow should be carefully shovelled away from the plants so as to relieve their branches. In neglect of this, we have known some of the finest young fruit trees and shrubs of our gardens utterly ruined.

THREE THURSDAYS IN ONE WEEK.

Of all the paradoxes there is none more surprising or calculated to disturb the mind than that which asserts the possibility of having three Thursdays in one week. It is, notwithstanding, possible; and during the last century it was demonstrated more than once. Circumnavigators in their voyages round the world have discovered the fact. The ancients never entertained an idea of the possibility of such a thing. It was a matter of astonishment to seamen sailing round the world, to find on their return to the place from which they commenced their voyage, that they had gained a day. It was Thursday with them, and Wednesday at the place of their arrival.

On the contrary, those who sailed westward round the world, counted on their return, one day less to have passed than those did who had continued all the while at the place from whence the ship set out; so that it was Wednesday with the circumnavigators, and Thursday at the place of their arrival. As the pilots and others kept journals, and paid strict attention to every occurrence during the voyage, they were, in the first instance, at a loss to account for the difference they found between the journals of those who had sailed east, and those who had taken a westerly course. They accused each other of negligence, and the dispute led to a strong contest. Several able mathematicians at last discovered the cause. They found that the difference in time was occasioned by the laws of nature, and not the fault of the navigators.

The reason will be easily seen. Every fifteen degrees east from the meridian of London, it will be noon one hour sooner than with those of London. When they reach the meridian of Cairo, thirty degrees east of London, they will have noon two hours sooner than those at London, and so on in the same proportion. Every meridian they arrive at will bring the natural day one hour sooner than at London, so that when they have got quite round the globe, and returned to London again, they will have gone 360 degrees, and it will be noon, according to their reckoning, 24 hours, or a whole day, sooner than to those who stay at London; or Thursday to them, when it is but Wednesday noon in England.

On the other hand, if a ship set out from London and sails westward, when they come to the meridian of the Canary Island, 15 degrees west of London, their noon will be an hour later than at London. At 30 degrees west it will be noon two hours later than at London, and when they get round to London again, through the 27 meridians, their natural day will be 24 hours later than at London, or Wednesday noon with them, while it is

Thursday noon at London. In this affair it is not necessary a ship should go round the world on the equator, it is sufficient if she passes through the several meridians, as all navigators must who go round the globe eastward or westward.

For example: suppose a traveller embark at Rochelle to go to the East Indies, when he shall arrive at the distance of 180 degrees east longitude, half the circumference of the earth, it will be midnight there and noon at Rochelle. It follows that, in making the whole circle of the globe, he will gain twenty-four hours upon the day at Rochelle. If it is Wednesday at Rochelle, thus there are two Thursdays in a week. To find a third in the same week, we must dispatch another navigator, to sail from east to west. When he has reached 180 degrees of longitude, he will find himself opposite to that of Rochelle, and it will be Tuesday midnight, when they will have noon on Wednesday at Rochelle; they would find a difference of twenty-four hours between their reckoning. The Wednesday at Rochelle is Thursday for those who went to the east, because they gained a day. Secondly, the Friday of Rochelle is Thursday to those who sailed west, because they have lost a day. The Thursday at Rochelle is the third. Thus, according to the time, there are three Thursdays in one week.—*Nantucket Inquirer*.

For the New England Farmer.

LITTLE THINGS:

OR, A WALK IN MY GARDEN...No. 6.

Cold weather, you will exclaim, Mr. Editor, to walk in the garden, with the thermometer down to zero. But let us see. Yesterday was a pleasant January day. So with saw in hand, I ventured out on the snow-banks, and walked into the tops of my

APPLE TREES.

Now don't, kind reader, turn up your nose, because your theory differs from mine. What does the surgeon do when he amputates a leg? O, he *dresses* it carefully as possible; very well. So do I dress a limb of a tree after it is sawed off, and common sense requires it as much in one case as in the other. But I find it pleasant, as well as convenient, on a leisure day to go out and trim off the shoots and dead branches, and when a warm day comes in spring, I go all over the orchard with a ball of grafting wax, or some shellac dissolved in alcohol, and cover every wound. If you are not willing to do this, then don't prune till the leaves are set, or, which is, perhaps, better, till September and October, which with me is a very busy season. I see where I have practised pruning and dressing in years past, as I have described, that the bark is lively, and the healing process is going on all around the wound, a point of the greatest importance. My theory on this subject, is to take care and dress your wounds, make them when you will. But let me get over this snow-bank and look into the

FRONT YARD.

I want to tell your farmer readers how they may have a front yard filled with the most thrifty trees and shrubbery without any expense. A great many persons build a house, put up a front yard fence, and set out four elm or maple trees, and leave them to take care of themselves. The probability is that

about one of the number will live in a sort of doubtful condition for several years, and then either conclude to live or die.

Now I will tell you how I did. I had a small front yard, thirty-six by eighteen feet, fenced in from a common. I spaded up the ground, manured and planted it with potatoes, and cultivated them thoroughly, and obtained a crop which more than paid me for my labor. The next year I spaded, took out the small stones, manured and sowed with carrots, beets, and other roots, and at the same time set out a row of trees around the garden, consisting mostly of rock maples. The neat-looking beds were no mean ornament, as the weeds were kept out. A handsome crop of vegetables rewarded me this year. The second year of planting my trees, I had shoots eighteen inches in length. There is no tree that loves good treatment like the maple. As opportunity occurred, I introduced trees and shrubbery and diminished the space for garden vegetables, until I had a complete forest in my little front yard without any real expense whatever but which enhanced the value of the property in the market at least twenty-five per cent. One of these maples has been planted seventeen years, and has grown from one inch and a half in diameter to forty inches in circumference, and the luxuriance of the trees has been so great, that more than half of them have been cut out. I deprecate the habit of digging a hole in hard soil and crowding in a tree with the expectation of having a shade tree in the present generation, when a good shade may be obtained in five years, by the method I adopted. As ever, I am sometimes zeroically, and at others ther- moically, yours,

N. T. T.

Bethel, Me., Jan. 26, 1856.

VERMONT MARBLE.

Mr. M. M. Manly, of South Dorset, Vt., who is largely engaged in the marble business, and who recently offered a prize of \$10,000 for the best marble sawing machine, furnishes the *Scientific American* with some interesting information in regard to this important interest. He says the quarries of Vermont alone are now valued by their owners at not less than \$15,000,000. The marble formation extends the entire length of the State, and runs also through Berkshire County, in Massachusetts, through western Connecticut, and, he thinks, into New Jersey. And probably these marble interests are not a moiety of those which exist in the country. The business is yet in its infancy, although it has increased more than a hundred-fold in ten years. In Vermont, marble of almost every kind is found, from the ebony black to the snowy white, and varying nearly as widely in texture. Sudbury, Brandon, and Middlebury have statuary marble equal to the best Italian, as the busts of our native sculptor, Kinney, testify. Roxbury has an inexhaustible supply of the true *Verd Antique*, so identical in composition and appearance with that hitherto obtained from ancient ruins, that the best judges have mistaken the one for the other. Although these quarries have been opened but a couple of years, this beautiful stone has already found

its way into the new capitol extension at Washington, and into the parlors of the rich in New York and Paris. The committee for the erection of the Benjamin Franklin monument in Boston, adopted it for that purpose, after subjecting it to the severest tests of heat, cold, and pressure. The "Vermont Italian" quarry of Dorset presents a bold front on the side of the mountain, half a mile long by 150 feet high, and of a breadth which ages cannot exhaust. Rutland alone turns out half a million dollars' worth a year.

Mr. Manly's prize offer for a sawing machine appears to have been fully successful. He states that sixteen patents have already been granted for machines of the character proposed, and several of these are now doing satisfactory work. In a short time a number more will be added to the list.

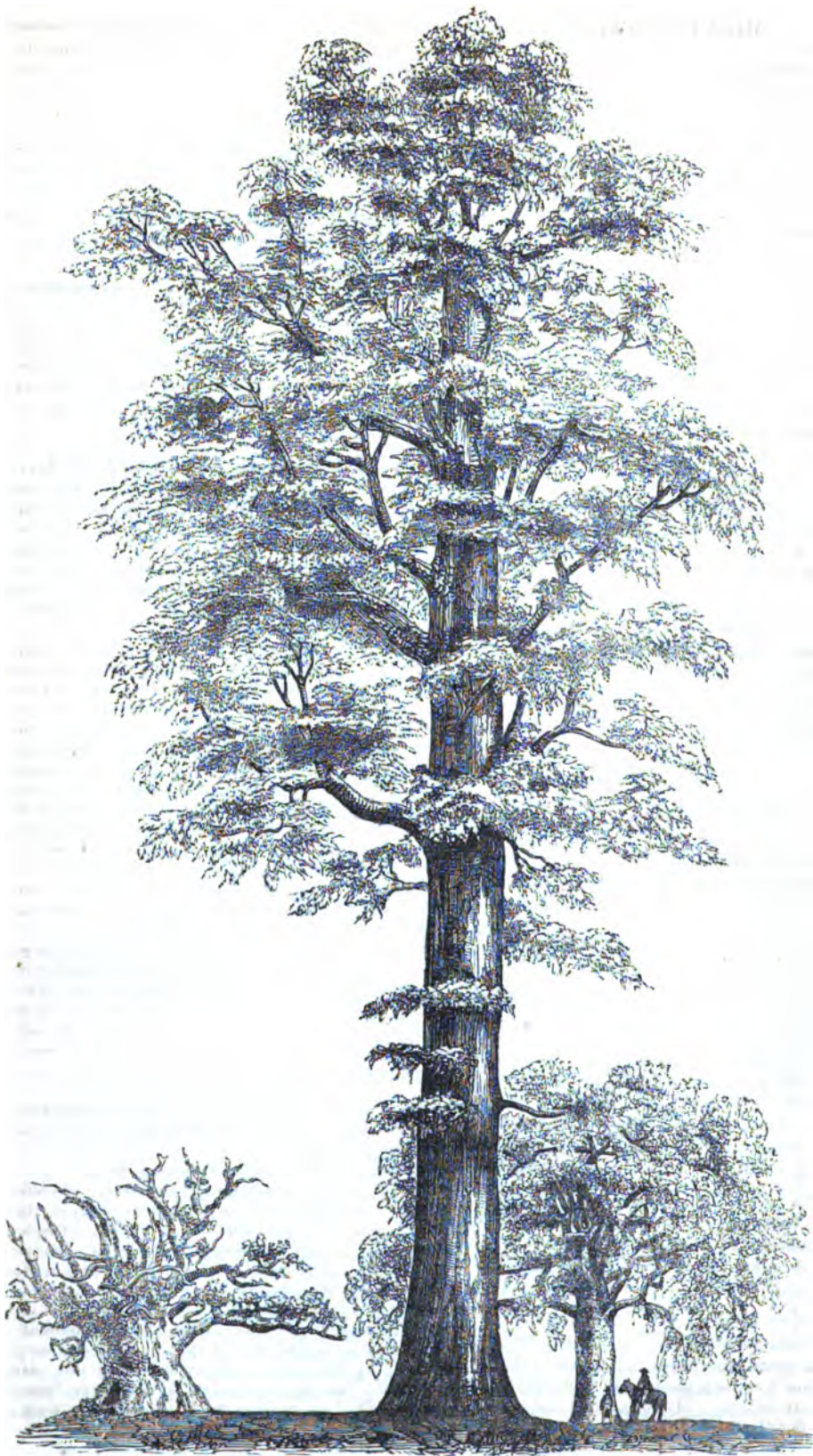
A YOUNG MAN'S CHARACTER.

No young man who has a just sense of his own value will sport with his own character. A watchful regard to his character in early youth, will be of inconceivable value to him in all the remaining years of his life. When tempted to deviate from strict propriety of deportment, he should ask himself, can I afford this? can I endure hereafter to look back upon this?

It is of amazing worth to a young man to have a pure mind; for this is the foundation of a pure character. The mind, in order to be kept pure, must be employed in topics of thought which are themselves lovely, chastened and elevating. Thus the mind hath in its own power the selection of its themes of meditation. If youth only knew how durable and how dismal is the injury produced by the indulgence of degraded thoughts, if they only realized how frightful are the moral depravities which a cherished habit of loose imagination produces on the soul—they would shun them as the bite of a serpent. The power of books to excite the imagination, is a fearful element of moral death when employed in the service of vice.

The cultivation of an amiable, elevated and glowing heart, alive to all the beauties of nature, and all the sublimities of truth, invigorates the intellect, gives to the will independence of baser passions, and to the affections that power of adhesion to whatever is pure, and good, and grand, which is adapted to lead out the whole nature of man into those scenes of action and impression by which its energies may most appropriately be employed, and by which its high destination may be most effectually reached.

The opportunities of exciting these faculties in benevolent and self-denying efforts for the welfare of our fellow-men, are so many and great, that it really is worth while to live. The heart which is truly, evangelically benevolent, may luxuriate in an age like this. The promises of God are inexpressibly rich, the main tendencies of things so manifestly in accordance with them, the extent of moral influence is so great, and the effects of its employment so visible, that whoever aspires after benevolent action, and reaches forth things that remain for us, to the true dignity of his nature, can find free scope for his intellect, and all-aspiring themes for the heart.



GIANT REDWOOD.

"Giant trees,
Children of elder time in whose devotion
The chainless winds still come, and ever come,
To drink their odors, and their mighty swinging
To hear—an old and solemn harmony."—*Shelley*.

We copy from a new work on "*The Trees of America*," by Dr. PIPER, of Woburn, Mass., and by his consent, the above splendid specimen of the vegetable kingdom, the Giant Redwood of the Snowy Mountains of California. This tree is reported to have been *four hundred and fifty feet high*. It is not represented in our engraving as entire, as when sketched a portion of the top was broken off.

Dr. HUNTER, in speaking of one the gigantic English oaks, which measured forty-eight feet in circumference, says, "When compared to this, all other trees are but children of the forest. This enormous oak would scarcely make a branch for one of these gigantic Californians. A drawing of this oak and the big elm on Boston Common are shown in the plate, drawn on the same scale as the Redwood.

Dr. F. WINSLOW, an American traveller, communicated a graphic description of this tree to the *California Farmer*, which we introduce here, together with interesting remarks from the *Country Gentleman*:

"The *Great Tree*, (thus he distinguishes the *Sequoia gigantea*), is peculiar to the Sierra Nevada, and grows no where else on the globe. I may even add, as far as my information extends, that it is entirely confined to a narrow basin of 200 acres at most, of which the soil is silicious and strewn with blocks of Lignite. This basin is very damp, and retains here and there pools of water; some of the largest of the trees extend their roots directly into the stagnant water, or into the brooks. There are more than a hundred which may be considered as having reached the extreme limits of growth which the species can attain. One of our countrymen, Mr. Blake, measured one, of which the trunk, immediately above the root, was 94 feet in circumference. Another, which had fallen from old age, or had been uprooted by a tempest, was lying near it, of which the length from the roots to the top of branches was 450 feet. A great portion of this monster still exists, and, according to Mr. Lapham, the proprietor of the locality, (and who has undoubtedly appropriated to himself all trees by right of occupation,) at 350 feet from the roots the trunk measured 10 feet in diameter. By its fall, this tree has overthrown another not less colossal, since at the origin of the roots it is 40 feet in diameter. This one, which appeared to me one of the greatest wonders of the forest, and compared with which man is but an imperceptible pigmy, has been hollowed, by means of fire, throughout a considerable portion of its length, so as to form an immense wooden tube of a single piece. Its size may be imagined when it is known that one of my companions, two years ago, rode on horseback in the interior of this tree for a distance of 200 feet, without any inconvenience. My companion and myself have frequently entered this tunnel and progressed

some sixty paces, but have been arrested before reaching the end by masses of wood which had fallen from the ceiling. Near these overthrown giants others still are standing, not inferior to them in size, and of which the height astonishes the beholder. I can mention three particularly, which, entirely isolated, grow near each other so systematically as to appear to have been planted purposely to produce the effect. A fourth is remarkable in having between 50 and 100 feet from the ground, its trunk divided into three enormous branches of the same size and nearly parallel, extending to a distance of more than 300 feet. Others are distinguished by the straightness of their trunk, comparatively as delicate and erect as that of a pine tree, and which are not less than 350 feet in height. At some distance may be seen a species of knoll rising from the surface of the ground, and which is merely a half-developed knot, the last remains of one of these monsters, which have fallen centuries ago and are now buried under the soil.

"I am informed by Mr. Lapham, that the wood of one of these trees is remarkable for its very slow decomposition. When freshly cut the fibre is white; but it soon becomes reddish, and by long exposure to the air acquires a color nearly as dark as Mahogany. Its consistence is rather feeble, nearly resembling the pine or cedar, but the bark covering it differs materially from the latter. It is excessively thick near the foot of the tree, sensibly elastic on pressure, and is readily divided into a mass of fibres closely resembling those constituting the husk of the cocoa-nut, but much finer. About this portion of the trunk it is split in every direction by deep cracks, but at the elevation of 100 or 180 feet, it is almost smooth, and not more than two inches in thickness. At this point the bark is removed from the living tree for exportation. (How can such a sacrilege be tolerated!) A hotel has been built along side of the "Great Tree," the bark of which was exhibited last year at San Francisco, and, on its overturned trunk a sort of ladies' pavilion has been erected, which serves as an elegant promenade. In order to fell it the trunk was bored, by means of a very long and powerful augur, with many holes very near to each other and arranged circularly; but even when almost detached from its bases its immense mass resisted all efforts to overthrow it. Four days subsequently it was blown down by the wind. It shook the earth when it fell, and made for itself a deep furrow in the ground in which it lies, at this moment, half buried."

The *Country Gentleman* adds:

"Now to read simply of a tree four hundred and fifty feet high, we are struck with large figures, but we can hardly appreciate the height without some comparison. Such a one as that through which the horseback journey was performed, would stretch across a field of twenty-seven rods wide; if standing in the Niagara chasm at Suspension Bridge, it would tower two hundred feet above the top of the bridge; if placed in Broadway, New York, at the head of Wall Street, it would overtop Trinity steeple by one hundred and sixty feet, and would be two hundred and thirty feet higher than Bunker Hill monument, Boston; or two hundred and seventy above Washington monument, Baltimore. If cut up for fuel, it would make at least *three thousand cords*, or as much as would be yielded by sixty acres of good woodland. If sawed into two inch

boards, it would yield about three million feet, and furnish enough three inch plank for thirty miles of plank road. This will do for the product of one little seed, less in size than a grain of wheat.

By counting the annual rings, it appears that some of the oldest specimens have attained the age of three thousand years. If this computation is correct, and we see no reason to doubt it, they must have been as large as our best forest in New York, in the times of Homer and the prophet Elijah; and venerable and towering giants during the Carthaginian wars. In other words, "The Roman Empire has begun and ended" since they commenced growing. We hope the small plantation which comprises their whole number, will not share the fate of the world-renowned cedars of Lebanon on their native mountains, now reduced to a dozen in number, but that they will be protected and preserved, and only those that fall by old age be removed for exhibition. It would of course be idle to talk of transporting such a monster to this part of the country, weighing as it does some five thousand tons, and a portion of its shell only may be secured as a fragment of such a specimen in natural history."

For the New England Farmer.

AIR-TIGHT STOVES.

A recent article in the *Farmer* reminded me of an idea in relation to Air-tight Stoves. The true principle of an air-tight has almost been lost sight of within a few years, by making them small, under the mistaken notion that the smaller the stove, the greater the saving of fuel. There is no better method yet discovered of securing a soft balmy air in a room at a cheap rate than from an air-tight of large size. Manufacturers make small stoves to suit customers, but true economy will lead a man to inquire whether a small stove is not really the more expensive. It requires more labor to prepare the fuel. The air-tight principle is almost entirely lost. The high temperature of the stove speedily burns it out, as well as changes every particle of dust into carbonic acid, which will soon produce headaches, while it requires almost constant attention.

I have an air-tight made to order from the best of Russia iron, which has been in constant use for fourteen winters, and it is not worn out yet. It is two feet six inches in length and of the same height, and will warm any room, giving out a large volume of heat at a low temperature, which is the true secret of a good air-tight. Among all the comforts of life in my possession, I have never yet found one to equal the somewhat unfashionable looking air-tight.

I believe that a little attention would give us air-tight stoves that would warm our churches, school-rooms and private dwellings much cheaper and better than the present clumsy and expensive mode of brick furnaces. Any method by which a large radiating surface is obtained (and no material yet discovered will do it at a cheaper rate than sheet-iron) and a corresponding volume of heat at a low temperature, and the object will be accomplished.

I have noticed another fact in the school-room. The habit of putting water on a stove is in most cases an injurious one. There is a large amount of evaporation, and the moment a person who has not been exercising, steps out of doors, he feels an un-

usually chilly sensation, which is anything but agreeable. Then if there is any vegetable matter in the vessel, it will certainly generate carbonic acid, and pupils will complain very soon of headache. Water kept in an open vessel in any other part of the room will supply all the moisture necessary. I have not kept water on a stove for twenty years, and find it much better than formerly for the comfort of pupils. But few persons distinguish between vitiated air, and warm air. A room may be cold but have impure air, or it may be warm and pure. Hence the necessity of some ready means of ventilation.

N. T. T.

Bethel, Me., Jan. 14, 1856.

REMARKS.—Capital. This article alone is worth more than a year's subscription to any person who desires to keep his house warm at a cheap rate.

A HORSE WITH THE HEAVES.

HOW I BOUGHT A HORSE THAT HAD THE HEAVES, AND HOW I TREATED THAT DISEASE.

BY HENRY F. FRENCH.

MR. EDITOR:—Did you ever read the "Adventures of a Gentleman in Search of a Horse?" I read it years ago, and have never been so fortunate as to see it since. If I recollect aright, it gives the experience of a man, who set out to purchase a perfect horse, and with about the same success that King Solomon had in trying to find a perfect woman; and tells how he, like all the rest of us, got cheated again and again, in different ways, as the *best of people will*, and indeed are more likely to be than anybody else. Once he bought a fine animal that was advertised, as *sold for no fault only the owner wants to leave town*, and the new proprietor was led to feel the full force of the language, the first time he wanted to leave town, for his new steed could not be induced by any suasion, moral or physical, to budge a single rod from his stable door.

Perhaps it was not *that* gentleman, but another, who having purchased a nag, which was represented as *free from all faults*, and found him stone blind, brought him back to the seller, and reminded him of his statement.

"I hope," replied the seller coolly, "you don't call blindness a *fault*, when it is only the poor horse's *misfortune*!"

Everybody knows that I have no great pretensions to much knowledge about horses, and in order, therefore, to give my teaching due weight, you must be informed how I came by my education in this department of science. Be it known, then, that about five years ago, I chanced to be the proprietor of a mare, the veriest vixen that ever went on four feet. Among her other "amiable weaknesses," was a strange propensity to kick. It was her favorite amusement to kick at any other creature, quadruped or biped, that came within reach; and when tied alone, she would keep herself in practice by kicking up her heels, as high as the scaffold, about once in five minutes, accompanying the performance with a squeal, that could be heard by all the neighbors.

Such an animal was rather difficult to dispose of, as you may suppose. Mr. Pickwick and his friend, after they had led that "dreadful horse" six miles in the heat and dust of a summer's day, with-

out being able to mount him, were in a scarcely worse dilemma. Finally, my precious Kate, who was more of a "shrew" than even Petruccio's, having withstood most manfully (*womanfully* occurred to me, but I won't say it,) all my endeavors to tame her, commenced a new species of gymnastics, by kicking up in the carriage every time she felt the breeching in going down hill.

Now, as she would not work on the farm "for any man's persuasion," and was not precisely the kind of animal to sell to one's particular friend as "a steady family horse," and as I did not dare to risk my own wife and children behind her, I began to read the "Muck Manual" with the idea of computing her agricultural value for the compost heap, when fortunately I had occasion to drive her to the good old town of Derry in a sleigh. As I came up to Cameron's Hotel, at about a "three minute lick," as the jockeys say, I saw at the sign-post, a fine stately horse harnessed to a sleigh. I was examining him pretty carefully, when a man whose appearance announced him as one of "the fancy," stepped out and accosted me with "Well, friend, do you want to buy such a horse as that?" "I should like him," was my reply, "if he is as good as he looks, and you will sell him at a fair price, and take mine without any steel engraving."

"Why, what sort of a beast have you got? She looks well, and came up the street as if she had legs enough."

I hope I shall be forgiven, if I suspected he would not believe more than half I said, when I replied, giving him the literal truth: "She is six years old, and sound, can trot a mile in three minutes, and will be likely to kick your brains out, if you take her, in the course of a week." He assured me that *his* horse was perfectly sound and kind; that his price was three hundred dollars, and that he would "swap right;" adding coolly, "I should like to see one horse that is uglier than I am."

I proposed to drive his horse, alone, to which the owner at once assented, and I steered straight off to the stable of a man, famous for his skill in horse-flesh, whom I had known when I was a boy there at Pinkerton Academy, and asked him to examine the animal with me. We drove him out of sight, and gave him a thorough investigation. We tried him in all his paces, walk, trot and canter, forward and backward, examined his teeth, his feet, his knees, his eyes. We observed his breathing, spoke of the glanders, the heaves, broken wind, and various other ills which horse-flesh is heir to. He was young, and large, and handsome, and fleet, and to all appearance sound and manageable; and yet we were perfectly satisfied that the horse had some defect.

However, I put a bold face on the matter, drove back to the hotel, and told my man I would give him fifty dollars to boot, or go along with my own horse. Without driving my mare an inch, he quietly unhitched his own horse from his sleigh, and exchanged harness, put him to my sleigh, and pocketed his fifty dollars, hardly losing a whiff of the cigar he was smoking. I confess I was a little startled at his perfect composure, but with a friendly caution to beware of Kate's heels, I bade him farewell.

I had but five miles to drive that afternoon, to my native town of Chester, where I stabled my new horse for the night. I gave him the name of the "General," it being a time of political excitement, when both candidates bore that title. I never min-

gle politics with agriculture, and did not want my horse to run a political course.

Having dreamed of horses all night, besides having the *nightmare* once or twice, I awoke betimes, anxious to learn the condition of my new treasure. Everybody knows how much more pride one feels in his horse, than in any other property, and especially how it takes the conceit out of him to be cheated in a "horse-trade."

I went to the stable with fear and trembling, doubting whether the "General" had not been transformed like fairy gold to dust and ashes during the night, or whether he might not have been a witch's horse, and be found turned into a broomstick!

But he was there in full shape and proportion. He gave a slight cough as I opened the door, a sound which a man who has owned a horse with the heaves will never forget; and on examination, I found he had a strange way of breathing, his flank heaving two or three times at every expiration of the breath. I was told at once that my horse had the *heaves*.

I had heard of the disease frequently, and had the impression, which I find is quite common, that it renders the animal worthless. However, as it was a complaint which struck at my purse and my feelings, and not like Katy's heels, at my *head*, I concluded to be resigned, and avail myself of my very manifest advantages for observations on its symptoms and treatment.

My horse went home to Exeter, sixteen miles, in fine style with no symptom of disease, except once in a mile or two a slight cough. Straightway I strove to learn all that books and stable-men can tell of the heaves, and to try all known remedies.

In its common form it is thought to be a formation of air-cells on the outside of the lungs, from which the air escapes with difficulty. Sometimes, on dissection, the proper air-cells of the lungs are found to be ruptured, and generally there is inflammation of the throat and windpipe. The theories about it are various. It is often said that the lungs have not room for action, and that food should therefore be given in a condensed form, and in a moderate quantity—and this I should regard as correct, were it not notorious that horses at grass, where they eat enormously, and keep their stomachs distended, are usually relieved of their worst symptoms.

I tried all sorts of heave powders on my patient, with no effect whatever. It is said that in a limestone country this disease is unknown, and lime water was prescribed with no apparent advantage. Some one told me to give the horse ginger, and strange to tell, I found that a tablespoonful of ginger given to the General with his oats, would cure him for the day, in half an hour after he had eaten it; but on giving it daily, the effect soon ceased. It is a jockey's remedy, and will last long enough to swap upon. Finally, I was advised to cut my horse's fodder and give it always wet. I pursued that course carefully, keeping the General tied with so short a halter that he could not eat his bedding, giving him chopped hay and meal three times a day, and never more than a bucket of water at a time.

He improved rapidly. I have kept him five years, making him a *factotum*—carriage horse, saddle horse, plow and cart horse—and he bids fair to remain useful for five years to come. Kept in this way, his disease does not lessen his value for speed or labor, a single dollar. When the boys grow care-

less, and give him dry hay, he informs me of it in a few days by the peculiar cough I have mentioned; but sometimes, for six months together, no indication of disease is visible, and he would pass for a sound horse with the most knowing in such matters. There is no doubt that clover hay, probably because of its dust, often induces the heaves. Stable keepers with us, refuse it altogether, for this reason.

Many suppose that the wind of the horse is affected by the heaves, so that fast driving at any time will, as we express it, put him out of breath. With my horse, it is not so.

When the "General" was at the worst, rapid driving, when just from the stable, would increase his difficulty, but a mile or two of moderate exercise would dissipate the symptoms entirely. We have, occasionally, what are called *wind-broken* horses, which are nearly worthless for want of wind. They can never be driven rapidly without great distress, and frequently give out entirely by a few miles' driving. This is thought to be a different disease. The "General's" case is, I suppose, a fair example of the heaves.

I have no doubt that regular feeding with chopped and wet fodder, and exclusion of dust from hay fed to other animals in the same stable, would render many horses now deemed almost worthless, and which manifestly endure great suffering, equally valuable for most purposes, with those that are sound.

And now, my dear sir, if you will call on me when the snow has gone, and the birds begin to sing, I will show you the "General," fat and sleek. I shall be glad, also, to show the *country gentlemen* of our neighborhood, one whom they already know by his works, as a man who has done much to make the earth fruitful and beautiful, and to enhance the enjoyments of Rural Life.

The above account of "How I bought a Horse that had the Heaves, and how I treated that Disease," was furnished some time since for the columns of the *Country Gentleman*, by HENRY F. FRENCH, Esq., of Exeter, N. H. The spirited style in which it is narrated will give double effect to the lesson it teaches. Though extensively copied at the time of its publication, we think it well worthy of a wider circulation, as well as a convenient form for frequent reading.—*Illustrated Annual Register of Rural Affairs.*

REMARKS.—We have often had an agreeable ride at the expense of "The General's" strength, and have seen him at the plow, and in all sorts of harness, and everywhere conducting himself as a very sensible and powerful animal. Proper treatment in feeding, working and stabling, will accomplish more than all the nostrums of the shops, as will be seen in this case. At the age of *fifteen*, the General is still *sound* as he was when "one of the Fan-ory" stepped out of Camerons' Hotel and accosted our Associate with, "Well, friend, do you want to buy such a horse as that?"

THE VETERINARY JOURNAL.—The number of this useful work for January contains a lecture by D. D. SLADE, M. D., delivered at the opening of the *Boston*

Veterinary Institute, which gives a brief history of the horse, his uses, treatment and importance, and also of the *abuses* which prevail, and the necessity of placing the veterinary medicine of our country upon the basis which it merits. The paper is a capital one, and ought to be read by all who have the charge of horses. There is also an Essay on Diet, a paper on Chronic Cough, one on the present prevalent disease among horses, one on ill-using horses, which we intend to copy, and several topics are discussed, all of an interesting and practical character. The work ought to be well sustained.

The number for February has a most spirited engraving of the horse, "Wild Air," owned by J. S. Durgin, of Fishersville, N. H., the conclusion of the article on diet, articles on horse influenza, black leg in cattle, &c.

A SNAKE COMBAT.

Combats between the rattle and black snakes are certain if they meet, and the black snake is, with rare exceptions, the conqueror. Upon seeing each other, those animals instantly assume their respective attitudes of defiance, and display the great difference in their organization. The rattlesnake coils itself up, ready for attack or defence; the black snake, being a constrictor, moves about from side to side, and is in constant activity—naturally exciting each other's passions. The rattlesnake finally settles down into a glowing exhibition of animosity, its fangs exposed, its rattles in constant agitation. The black snake, seemingly conscious that the moment of strife has come, now commences circling round its enemy, absolutely moving so swiftly that it seems but a gleam of dull light; the rattlesnake attempts to follow the movement, but soon becomes confused, and drops its head in despair; then it is that the black snake darts upon the back of its deadly foe, seizes it between its teeth, and springing upward, envelopes the rattlesnake in its folds. The struggle though not long, is painful; the combatants roll over in the dust, and get entangled in the bushes; but every moment the black snake is tightening its hold, until the rattlesnake gasps for breath, becomes helpless, and dies. For a while the black snake still retains its grasp; you can perceive its muscles working with constant energy; but finally it cautiously uncoils itself, and quietly betakes to the water, where recovering its energy, it dashes about a moment as if in exultation, and disappears from the scene.

For the New England Farmer.

MEASURE OF MILK.

MR. EDITOR:—We are accustomed to look to those in authority for guidance in the ways of life. I hear much said about the measure of milk. My milkman has lately altered his measure from beer measure to wine measure, and his price from seven to six cents per quart. I wish you or some of your statistical correspondents, would inform which gains by this change?
Feb., 1856.

THE TREES OF AMERICA.

Under this title Dr. R. U. PIPER, of Woburn, Mass., has issued the first number of a work of surpassing interest and beauty. It is in quarto form, printed on fine, heavy paper, with large and handsome type, and illustrated with a beautiful vignette, and a portrait of the *Giant Redwood*, copied by permission, and given in another column of this paper, the "Assabet Oak," on the Randall estate at Stow, and the "Avery Elm," at Stratham, N. H.

Dr. PIPER is a genius. We have seen various specimens of his artistic skill which are wonderful. His illustrations in surgery, with their exquisite colorings, would alone give any man an enviable reputation, and so would his transfers of the frost-work on windows, also colored in any desirable tint. That the reader may better understand the purpose of the Doctor we give below his own explanation.

The subscriber proposes to publish a work on **TREES OF THIS COUNTRY**, accompanied with steel engravings of such trees as are of interest, on account of their size and history, &c. Like their compatriots, the Soldiers of the Revolution, many of these venerable trees will soon have passed away, and it seems an object of much interest to preserve their memory for the future. Every other civilized country has done this work, making it a matter of national concern. We have trees in our country as beautiful as any of which foreign countries can boast, and of far greater magnitude; many of which possess, to us, also much historical interest.

To the description of each particular tree will be added whatever may be deemed of interest in regard to the cultivation of the species to which it belongs, giving the best method of transplanting, &c. In this department the author has, in addition to his own experience, the promise of the aid of the most eminent Arboriculturists in this country.

It is intended to give twelve or more Plates during the year, adding perhaps a few foreign trees of note, for comparison.

The work will be issued in Quarterly Parts, each Part containing at least three plates, with the description. Price of one year's subscription, two dollars, payable in advance. R. U. PIPER.

THE GRAPE VINE.

Our people are taking a great interest in the culture of the grape; and since the success of Mr. BULL, in introducing a variety at once excellent in flavor, and so early and hardy as to ripen before our usual autumnal frosts, and withstand the low temperature of our winters, there is great encouragement for renewed efforts.

Our object now, is, however to make a suggestion or two to those already possessing vines in different stages of growth, and those we find at hand in "*The Soil of the South*," an excellent paper published at Columbus, Georgia. It says, "Whatever pruning is to be done, should be done now. The native vines are found only to succeed well in open culture. They will not need pruning so much to

force the formation of fruit, as to keep the vine within bounds; for in good soils, they are all rapid growers. The small limbs branching from the main stem, may be cut back to three buds; each one of these buds will make fruit. So if each one of the lateral branches produces three bunches of grapes, the vine will make a splendid yield. The main vine may be cut back, when it is necessary, but if fruit be the object, only prune the laterals. If the vine wants invigorating, dig in a mould from the woods and swamps, with a little good guano, or hen manure with it, around the roots, not merely at the base, but ten or twenty feet from it. Train the vine to trellis or posts before the buds begin to swell, otherwise the buds may be rubbed off, and lost." Prune immediately before the warm sun and air starts the sap.

For the New England Farmer.

STATE REFORM SCHOOL.

MR. EDITOR:—I was pleased with the inquiry in your last as to the State Reform School at Westborough. It seems to me your correspondent was right, in considering this one of the noblest of the institutions of the State—both in its origin and in its object. The generous founder, who appropriated nearly *one hundred thousand dollars* of his patrimony to this institution, had enlarged views of its utility. It is the bounden duty of the State to see that these views are carried out to their full extent.

Compare it with other public institutions, such as the State Prisons—the State Alms Houses—the State Hospitals, and the like—all these are well enough in their place; but what is this—to provide for those that are *used up*, and from whom there is no longer hope of benefit to the community. Not so with the youth sent to Westborough. To be sure, they may have the misfortune to be without the protection and guidance of parents, but they are not wanting in physical and mental energy; and if properly guided they will be found the seed of hopeful promise.

There are several hundred boys, between the ages of ten to twenty, entirely under the control of the guardians of this institution. Provision is made for binding them out to service; but this is not compulsory, if they can be better instructed and employed on the farm.

Where could there be a better opportunity to educate and discipline good farmers? The connection of this school with the Board of Agriculture was a happy idea. Here you have a board of supervision drawn from every section of the State, selected by the best of farmers in those sections—coming together not for the purpose of enriching themselves by pocketing high salaries, but for the noble purpose of doing good;—if it be possible to find an organization from which much is to be hoped, this is the one. With all my heart, I say, Jan. 28, 1856. SPEED THE PLOW.

REMARKS.—The writer of the above is not only well acquainted with the institution and the farm on which he speaks, but from an extensive knowledge

and constant observation of other farms in the State, knows what may be accomplished at the State farm, under a judicious management. *There* is an opportunity to implant a love of rural life that shall guide hundreds of these unfortunate boys through life in the paths of usefulness and peace. We regard the *agricultural* teachings there—properly directed, to be of as much importance as the moral and educational in their schools, and believe our opinion would be sustained by the facts, if the lives and characters of all who have left the institution, could be ascertained.

EXTRACTS AND REPLIES.

COLD DAYS.

his month has had an uncommon number of cold days, I have kept a minute so far as follows:—

1856—January 5, Mercury at 7 A. M. 26 below zero.
January 7, Mercury at 7 A. M. 24 below zero.
January 16, Mercury at 7 A. M. 12 below zero.
January 21, Mercury at 7 A. M. 10 below zero.
January 23, Mercury at 7 A. M. 20 below zero.

Montpelier, Vt.

CHARLES BOWEN.

SEEDING LAND TO GRASS—DIFFERENT MODES OF DOING IT—WHAT CROPS SHOULD PRECEDE IT.

MR. EDITOR:—As you have a column dedicated to "Extracts and Replies," I should like to inquire what is the best crop to seed land down with? (a.) Also what the best crop to raise before that, with a good coating of manure? (b.) My farm is stony, and I want to know the grass that will be the most profitable, and still leave the land in the best possible condition for grass.

I am not able to drain my farm yet, and as it is rather wet to work to advantage at all seasons, it is very desirable to have it produce well as long as possible when once down to grass. J. B. F.
Lebanon, Oct., 1855.

REMARKS.—(a.) The queries of "J. B. F." suggest a reply extended to a column, or more, but we think in a few words, he may be afforded some relief. If your land has been planted a year or two, and you wish to lay it down in the spring, plow deep, manure and pulverize well, and if the soil is a heavy loam, inclined to be wet and tenacious, sow oats with your grass seed at the rate of two and a half or three bushels to the acre; but if the land is a gravelly loam, sow barley from five to seven pecks per acre, according to the richness of the soil and the state of the season. You may plant corn, cultivate without hilla, and at the third hoeing sow grass seed and rake it in. The corn keeps the ground moist, facilitates the sprouting and springing of the germ, and shelters the young plant when it is up. In harvesting the corn, the stalks should be level with the ground, so as not to interfere with the scythe when mowing the grass crop the next season. This is one of the *surest* methods of seeding down land to grass, and we believe one of the cheapest; we have never known a crop to fail when seeded in this way.

If your land is already in sward and needs re-setting, another method is to turn the sod under eight to twelve inches, dress with compost manure, harrow finely, and sow grass and turnip seed together, in the last of July or first of August. The turnip, not exhausting the soil much, costs little more than the expense of gathering, and will afford an excellent change with the dry food of winter.

(b.) Crops that precede seeding down to grass, should be such as leave the ground mellow, and free from weeds; and for this reason hoed crops are to be preferred, such as turnips, potatoes, corn, peas and beans.

If your farm, as you say, is "stony and rather wet," you will be quite likely to commit an error common to most of us—that of attempting to cultivate too much land. Suppose you select a single acre, or field, thoroughly drain it, plow deep, manure liberally, and cultivate well every way, and keep an exact account with it for three years, doing the same by an equal amount of land managed in the ordinary way, and then compare profits, and let us know the result? This would be the way to ascertain which mode would ensure the largest profits.

THE NEW ENGLAND FARMER.

DEAR SIR:—The specimen numbers of the *N. E. Farmer* sent me some weeks ago, were read with no small degree of satisfaction. I know not how a farmer can spend a dollar to better advantage than to enroll his name on your subscription list. *Pay in advance* makes subscribers like both editor and paper a hundred per cent. better than when they know they are in debt to both.

CROPS IN CHESTER COUNTY, PENN.

We had a fine fall, but January has been severe, with good sleighing. Wheat appeared well before the ground was covered, and there is a large quantity put in. We had good crops of corn and potatoes. There will not be as much corn put in the coming spring as last, because so much of the ground is occupied with wheat.

Near Lewisville, Pa.,

C. R.

TO CORRESPONDENTS.—Articles have been received on Willow Fences, How to raise Colts, Singular Apple, Things in Vermont, South Down Sheep, In Regard to Capt. Symme's Hole, Liquid Manures, Horse Racing at Cattle Shows, Preserving Forests, Barns, Farm Buildings, Use of Plaster, Planting Out Potatoes, Poultry, Rearing, Preparation for Market, &c., Orcharding for Stock, a fine Ayrshire Cow, Science and the Farmer, Green Corn for Soiling, Reports on Cashmere Goats, Experiments with Superphosphate of Lime, The Open Polar Sea, The Plow, Green Wood, Management of Stock, State Reform School, &c. These articles are mostly from practical farmers, and will be given so far as our limits will permit.

AN OCEAN RIVER IN THE PACIFIC.

Lieut. Bent, of the U. S. Navy, read an interesting paper before the New York Geographical and Statistical Society, last week, on the existence of an ocean river in the Pacific, flowing to the northward and eastward along the coast of Asia, and corresponding, in every essential particular, with the Gulf stream of the Atlantic. We find a brief report of this valuable paper in the New York *Evening Post*, from which we condense a few of its facts.

The existence of a strong northeast current on the coast of Japan was noticed by Cook and other early navigators, and the Japanese have given it the name of the "Kuro-Siwo," or "Black Stream," from its dark blue color, as compared with the adjacent ocean. Springing from the great Equatorial current of the Pacific, the oceanic stream extends from the Tropic of Cancer on the north, to Capricorn, with a width on the south of three thousand miles, and a velocity of from twenty to sixty miles a day. Upon reaching the coast of Asia, it is diverted to the west, and in passing through the great Polynesian Archipelago is split into innumerable streams, which diffuse a fertilizing warmth over that portion of the globe. The influence of the Kuro-Siwo upon the climates of Japan, and the west coast of North America, is, as might be expected, as striking as that of the Gulf Stream on the coasts bordering the North Atlantic. From the insular position of Japan, with the intervening sea between it and the continent of Asia, it has a more equable climate than we enjoy in the United States. The softening influence is also felt on the coasts of Oregon and California, but in a less degree, perhaps, than those of the Gulf Stream on the coasts of Europe, owing to the greater width of the Pacific ocean over the Atlantic. Still, the winters are so mild in Paget's Sound, in lat. 48 deg. north, that snow rarely falls there, and the inhabitants are never enabled to fill their ice houses for the summer, and vessels trading to Petropaulowiki and the coast of Kamtschatka, when becoming unwieldy from accumulation of ice on their hulls and rigging, run over to a higher latitude on the American coast, and thaw out, in the same manner that vessels frozen up on our own coast retreat again into the Gulf Stream until favored by an easterly wind.

HOW TO RAISE MELONS.—We would invite the attention of all lovers of good melons to the advertisement on the cover of this Number, of S. C. Abeel. The editor of the *Wisconsin Farmer* says: "From what we know of Mr. Abeel's method, we think there is no humbug about it. When a resident of Janesville, we lived neighbor to him three years, and know that he has unbounded success in cultivating melons—raising from one to ten acres annually."

For the New England Farmer.

COMMENDABLE FEATURE.

If "commendation commonly animates mankind," would the mention of the commendable features of the *Farmer* animate its contributors to perfect and to perpetuate them? The hope that it would, has incited me to mention one which every contributor can help perfect and perpetuate, and which adds not a little to the interest and circulation of this valuable paper, whose influence for popular education is inestimable. It is the distinct signature of each contributor, and the town from whence the communication comes. How natural, before reading a piece, for the eye to glide down the column to see what town is represented. Will each writer give his town, thereby ensuring extra interest to his communication, and oblige many a

Brookfield, Dec., 1855.

YEOMAN.

MANAGING BEES.

SAXTON & COMPANY, N. Y., have published a little *Manual, or an easy Method of Managing Bees, with infallible rules to prevent their destruction by the Moth*. It is by JOHN M. WEEKS, of Salisbury, Vt., and has an Appendix, by WOOSTER A. FLANDERS, of Northfield, Vt. We have had sufficient experience as a bee-master, to know that both these gentlemen must have had a good deal of experience in their subject to write as they have, as the work abounds with excellent suggestions and directions. Its descriptions of the bee and its management are clear and pleasantly written. Having never seen the practical workings of the hive which they recommend, we cannot speak of it from any personal knowledge. It is for sale by Redding & Co., Boston, price twenty-five cents.

BOYS' DEPARTMENT.

EARLY MENTAL ACTIVITY.

"Experience," says Dr. Spurzheim, "demonstrates, that of any number of children of equal intellectual power, those who receive no particular care in childhood, and who do not learn to read and write until the constitution begins to be consolidated, but who enjoy the benefit of a good physical education, very soon surpass, in their studies, those who commence earlier and read numerous books when very young. The mind ought never to be cultivated at the expense of the body; and physical education ought to precede that of the intellect, and then proceed simultaneously with it, without cultivating one faculty to the neglect of others; for health is the base, and instruction the ornament of education."

Let parents then check, rather than excite in their children, this early disposition to mental activity, or, rather, let them counterbalance it by a due proportion of physical and gymnastic exercises; for it is not so much the intensity as the continuity of the mental action, which is injurious to the constitution. Let them not cause the age of cheerfulness to be spent in the midst of tears and in slavery; let them not change the sunny days of childhood into a melancholy gloom, which can, at best,

only be a source of misery and bitter recollection in maturer years.

Physical exercises and the cultivation of the perceptive faculties should, with the reading of moral and instructive books, form the principal occupations of children. Their expanding frame requires the invigorating stimulus of fresh air; their awakening organs seek for external objects of sense; their dawning intellect incessantly calls for the action of their observant powers. This is the great law of Nature. She has given to the child that restless activity, that buoyancy of animal spirits, that prying inquisitiveness, which makes him delight in constant motion and in the observation of new objects. If these wise intentions of Providence be not frustrated; if he be allowed to give himself up to the sportive feelings of his age, he will acquire a healthy constitution, and a physical and perceptive development, which are the best preparation for mental labor.

Of the men who have conferred benefit on society, and have been the admiration of the world, the greater number are those who, from various causes, have in early life been kept from school or from serious study. They have, by energetic and well-directed efforts, at a period when the brain was ready for the task, acquired knowledge, and displayed abilities which have raised them to the highest eminence in the different walks in life, in literature, the arts and sciences, in the army, the senate, the church, and even on the throne. The history of the most distinguished among those who have received an early classical education, sufficiently proves that it is not to their scholastic instruction, but to self-education after the period of school, that they chiefly owed their superiority.

David, the sublime author of the Psalms, followed in his early occupations the dictates of nature; he had, in his youth, muscular power to tear asunder the mouth of a lion, to resist the grasp of a bear, and to impart to a pebble velocity sufficient to slay a giant. Napoleon, when in the school of Brienne, was noted in the quarterly reports of that institution as enjoying good health; no mention was ever made of his possessing any mental superiority; but, in physical exercises, he was always foremost. Sir Isaac Newton, according to his own statement, was inattentive, and ranked very low in the school, which he had not entered until after the age of twelve. The mother of Sheridan long regarded him as the dullest of her children. Adam Clarke was called a "grievous dunce" by his first teacher; and young Liebig a "booby" by his employer. Shakspeare, Moliere, Gibbon, Niebuhr, Byron, Humphry Davy, Porson, and many others, were in like manner undistinguished for early application to study, and, for the most part, indulged in those wholesome bodily exercises and that freedom of mind, which contributed so much to their future excellence.—*Marcel*.

COURAGE AND DISCRETION.—A courageous ram took it into his head to resist a locomotive. The brave old sheep heard the whistle, the roar and the rumble; he saw the shower of fire and glaring eyeballs of the monster; he curled up his majestic head, and he battered his brow into the foe. Alas! poor ram! not a lock of wool nor a peice of horn could be found. The owner, in lamenting the loss of poor rammy, said:—"I admire his pluck, but confound his discretion."

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

TO MAKE INDIAN PUDDING.—*"Real Genewine Yankee Pudden."*—Take three pints of scalded milk, add as much fine, yellow Indian meal as will be sufficient to make a stiff batter, and a teacupful of molasses, with salt to your taste. Boil it four hours, or even longer, for boiling does not hurt, but improves it. A few ripe cherries or whortleberries will also improve it. Many think a small portion of suet (beef's) chopped fine, without the fruit, a good and even better addition. It is to be eaten with butter and molasses, of course.

This fine dessert of Revolutionary memory should occasionally have a place on every man's table. Down East it often comes to hand. Out West it is quite too rarely found.—*Ohio Farmer*.

BAKED INDIAN PUDDING.—Take three pints of scalded milk, one handful of wheat flour, three eggs, and as much Indian meal as will make the whole thick, like batter for pancakes. Add one gill of molasses, and salt to your taste. Bake three hours.—*Ohio Farmer*.

BEST NEW ENGLAND JOHNNY CAKE.—Take one quart of buttermilk, one tea-cup of flour, two-thirds of a tea-cupful of molasses, a little salt, one teaspoonful of saleratus, one egg (beat, of course.) Then stir in Indian meal, but be sure and not put in too much. Leave it thin—so thin that it will almost run. Bake in a tin in any oven, and tolerably quick. If it is not first rate and light, it will be because you make it too thick with Indian meal. Some prefer it without molasses.

A NICE DISH FOR BREAKFAST.—Take one egg and beat it up, add a teaspoonful of salt, pour into it about two-thirds of a pint of water, then slice some bread, dip it in, and fry in a little butter. Serve warm, and you will find it an excellent dish.—*Ohio Farmer*.

A PITY.—The young Prince of Wales, a lad of about thirteen or fourteen, is, it seems, already by a sad mixture of boyishness and dissipation, giving no little uneasiness to the maternal heart of the Queen, who has honestly enough, no doubt, tried all that a mother could, to keep him out of harm's way. With the education, learning, power and religion of all England, with its State Church at their backs, the royal pair, possessing no little education and taste themselves, find the same difficulty that George III. did, and all other kings have done from Henry III. downwards—the difficulty of providing the right kind of moral education for one born the heir apparent to the British throne. This arises in part no doubt from the anomaly of his position. He is a child educated with the knowledge that he is one day to be a king, the king over every inhabitant of Great Britain and its dependencies, embracing hundreds of millions of human beings, with a territory on which the sun never sets. A lad with his head filled with these ideas, surrounded by those whose interest it is to flatter and indulge all the whims of a child, in hopes of being remembered hereafter by the powerful young man, may well have his head turned, had he the wisest as well as the best of mothers.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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JOEL NOURSE, PROPRIETOR,
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

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GRASSES AND THE SMALL GRAINS.



ALL FLESH IS GRASS.

Never were words more true, or more full of meaning, than those of the Prophet Isaiah, when he said, "All flesh is grass."—

These four words, simple and unimportant as they at first seem, lead to a train of thought and investigation that results in the conviction that all flesh is literally grass; that this is the prime basis upon which rests all our agricultural operations, and that without it, civilization, nay, life itself, could not be sustained.

Cotton is a civilizer, and, more than all missionary ef-

fort, is introducing the comforts of artificial life among the rude and untutored in every part of the world. Like the introduction of *stoves* and *window glass*, it has shed new blessings on the race; only in its importance it far transcends them both. Deprived of the glass, the stove, the cotton, and even of wool, a limited number might still supply a few of the first physical requirements, and live. But not so with grass. Strike that out, and all animated existence dies without it: first the insect race, then the graminivorous, or grass-eating animals, then the carnivorous, or flesh-eating, and then, in the dismal train, man himself. And as if to stamp the grasses with the seal of usefulness, in every way, what a noble and exalted purpose they discharge in covering the earth with unnumbered forms of grace and beauty of coloring. How beautifully they adorn the surface, and "thus make manifest to us, in their very existence, and in all their

thousand wonders, the Almighty Creator of heaven and earth."

And yet the grass crop, so important in every respect, has not received an equal attention with the animals that are to be supported by it.

The grasses comprise a numerous family, some four thousand varieties having been noticed, scattered over various parts of the globe; but among these, only some twenty kinds, which will in one summer produce rich food, independent of the dry heat and rigid cold of our climate, have been chosen,—and some three, four, or perhaps half a dozen of these are under general cultivation among us. The grains, as we term them, our oats, rye, barley, wheat, and even Indian corn, are as much grass, as the meadow cat's-tail or red-top. Their seeds are larger than those of the herds-grass, and therefore, more conveniently appropriated to our use, so we distinguish them from the other grasses by a specific name, and at length are apt to forget that they belong to the same genus.

"Grasses," said a distinguished philosopher, "are Nature's first care. They are the most general, extensive, and hardy of the earth's productions. They are nearly of endless variety, and adapted to almost every climate. They endure the trampling of men and beasts, the browsing of cattle, the parching droughts of summer, and the snows and ice of winter, and spring into new and often more vigorous life, under influences which to other plants would prove destructive.

"On mountain tops, where the warmth of the summer's sun is not sufficient to ripen their seeds, they live by their roots, and with thick, clustering leaves protect these roots, producing thereby the densest and most beautiful verdure. And it is reported by one writer, that, for the preservation of the grasses in those localities where the ripening of their seeds is important, the wild beasts, guided by a remarkable instinct, leave untouched the stems that support the flowers." The manifestation of such an instinct would not be more wonder-

ful, or command our admiration in any greater degree than that exhibited in many other things,—yet a more simple and natural explanation of the fact would be, that these flowers possess a flavor, of some pungent sort, which the animal feeding does not relish.

We have said that cotton is a civilizer—it would, indeed, be difficult to estimate or appreciate, the blessings it confers on mankind. It not only comprises the clothing of vast numbers, some of whom would wander naked without it, but it enters into nearly all the domestic articles we use. It shows the fair page of the book we read, or gives us the paper on which we write; makes a part of the bed on which we sleep or the carpet on which we tread; is a part of the stock used by the tailor, the book-binder, cabinet and shoe-maker and carpenter. It protects the hay of the farmer, encloses his wheat, flour and other products in sacks, and gives wings to commerce to waft them to the waiting nations of the world! Cotton is, also, a staple article in our manufactories, and gives employment to thousands of the sons and daughters of New England. It does not only civilize—it has refined and elevated civilization itself, and given it a thousand forms of the beautiful while it has supplied our wants; it is the *utile dulci*, “the useful with the pleasant,” and its era of general introduction will be marked in the annals of the world. Unlike the grasses, however, it does not flourish except under certain degrees of temperature, beyond whose limits it is cultivated in vain.

Rice is another article of great value, and like cotton, enters largely into our exports, amounting, sometimes, to nearly four millions of dollars in a single year. It is admirably adapted as sustenance to the human system, affording a healthful proportion of nutritive matter to the bulk required. It may be easily and long preserved, and annually feeds its millions, many of whom eat but little beside. But, like cotton, this article can never become one of general culture, as it requires a high temperature throughout its growth, and to be grown on alluvial soils, not only irrigated, but flooded for periods of considerable length.

Until lately, these two articles, cotton and rice, have been prominent in our tables of exports, and the nation believed that they were the *chief products* of our agricultural industry; that they gave us credit and character abroad, and fed us, or propelled the looms in our manufacturing districts at home. We mention these, particularly, because the political economist seems never to have investigated and compared some other leading crops with them, and to afford opportunity for a partial comparison now.

On reference to the last Census we find the hay crop of the United States for 1840, set down at 10,248,108 tons; in 1850, it was 14,000,000 tons;

in 1855, it would undoubtedly reach 15,000,000 tons, and at ten dollars a ton, would be \$150,000,000. The cotton crop of 1853 is valued at \$128,000,000. The hay crop of Massachusetts in 1850, at \$15 a ton, amounted to nearly ten millions of dollars, while the cotton crop of South Carolina at 4 cts. a pound, was less than two and a half million. We believe the corn and grass crops of Massachusetts will equal in value any two leading crops of any of the Southern States, leaving our vast mechanical, manufacturing and artistic products out of the question, in an estimate of the results of our industrial pursuits.

Compared with other crops, very little has been written or said in relation to the grass crop. We know not their number or names, or but that among those indigenous to our soils there may be those far better than our herds-grass, red-top, or clovers. In England, there are two hundred and fifteen varieties well known, named, and cultivated. With us a dozen varieties, perhaps, would exhaust our list; and yet some think there is no more room for investigation and for more accurate knowledge of the things around us; that hard hand-work is better and more profitable than seeking after new things by head-work.

Who knows but that in our fields, or on the way-side, trampled on and despised of men, or, perhaps all unknown, there is an unobtrusive plant, springing up, blossoming and struggling from year to year for notice and for a firmer hold,—but as often sought and eagerly fed off by the grazing animal who only knows how to appreciate it?

Like the potato, as large as walnuts in its native state, or the peach, bitter and dry and offensive, or the pear, with its hard, woody flesh, or the apple tree, with its thorns, so this humble plant may only want the fostering care of man to outvie the beautiful purple bloom of the herds-grass heads, or the carmine of the gracefully tasselled red-top,—and yield in nutritive matter more than either of these or the richest clovers.

Why did Infinite Wisdom create 4,000 varieties of grasses? Was it that man should avail himself of but one, or a dozen of these varieties, and the others remain unsought, untasted and unappropriated? Or did He expect that the reason with which he is endowed, and the intelligence which he might gain, would lead to investigation and a choice of these numerous varieties? Is there not room then, for study and research? “Who shall estimate the number of our grasses? Who shall classify them? And—what is a far more important question—who shall test them in the crucible of science, so that the practical farmer may, with certainty, avail himself of the advantages which will result from the cultivation of the best varieties?”

The two grasses familiarly known, and generally cultivated in Massachusetts, are timothy (so called

from its introduction into Maryland by the Rev. Timothy Hanson) and the red-top, and the red and white clover or honey-suckle. There are the meadow fox-tail, the rough cocks foot, or orchard grass, tall fescue, rye grass, &c., but few persons, however, are able to apply the name with certainty to the right variety, and the terms are seldom used.

Next to the adoption of the best varieties, is the importance of a proper cultivation of them. The average product at present is probably about one ton per acre. But this is not a paying crop—and no good farmer will cease his efforts until he adds half a ton to this average, or doubles it. When the expense of reclaiming, plowing, manuring and seeding down is taken into account, it will be seen that one ton brings little or no profit, and thus there occurs a waste of energy, of time, and interest invested in the land. In order to accomplish the result, three things must be regarded.

1. Thorough draining.
2. Deeper plowing.
3. Higher manuring.

Without the first, as a basis to start upon, both of the others will, in a degree, fail to accomplish the expected purpose. When this is effected, there will be no standing water to repulse the roots, and the *deep plowing* will enable them to roam at pleasure in search of agreeable locality or food. Here, then, is the superstructure; now add the fertilizing agents, subjecting the land to hoed crops, as far as possible, for two or three years before devoting it to grass, feeding it liberally just before it receives the seed, and then you have a basis from which to gather profitable crops through all time, so long as the same process is observed. It is simply acting on the consistent rule, "Feed your crops and they will feed you." The food must not only be there, but under such conditions that they can reach and appropriate it. If it is in cold spring water, they will not touch it; or if too near the surface, where the sun will smite them by day, or cold winds or colder vapors chill them by night, they will have no appetite to feed on your proffered bounty. But give them a mellow seed bed, mingled with fermenting vegetable and animal matters, through which the sun in heaven shall send his cheering beams, and the blessed showers shall percolate and find their gladsome way, fructifying every little rootlet with their moisture, and then you shall have, not only your two tons, but often three to the acre! Under these conditions, heat or cold, flood or drought, will have little influence on a grass crop; it becomes one of great certainty, and of generous profit.

Where grass is principally desired, and the land is not wanted for other crops, a practice is now observed of plowing the sward in August or September, and seeding at once. If the season is favorable as to moisture, this course operates well. The young grass comes readily, grows rapidly, and

gets such root-hold as to withstand the effects of frost, unless it is very severe. In the succeeding summer such fields often yield more than a ton per acre, and the second summer, if the operation was all right, from two to three tons. We have accomplished this in our own practice.

A more common practice is, to plow in the spring, manure and sow grass seed with about three bushels of oats to the acre. This course frequently operates well, but in many cases, failure is the result. The oats sometimes spring into a rapid growth, shading, and taking entire possession of the ground and utterly precluding the tender grass plants from any participation in the rays of the sun, and with scarcely a place whereon to stand. They gain little in root, and but a trifle in height, are slender, succulent and weak, and when the oat crop is cut, and the sun blazes in upon their tender heads, they quietly lie down and die, just as any sensible plant would be expected to, under such treatment.

Barley is a better grain to seed down with than oats, because it does not send out so many offshoots or tiller as much as oats.

Another course, and one for which we have much partiality, is to hoe the corn crop flat, and at the third hoeing in August, sow the grass seed, and rake it in. The process is not a slow or disagreeable one; indeed, I think it can be done at much less cost than some other modes of seeding to grass. In this position, the young plants have good opportunities for a fair and pleasant start in the world. The ground is mellow and moist, and protected from high wind by the corn, so that when the tiny seed starts and the tender germ takes hold of a neighboring morsel of rich muck or other fertilizing matter, it is not torn rudely away by the wind, but left to extract its supplies and grow fat upon them. The corn also breaks the direct rays of the sun from the young grass, but leaves sufficient heat to pass to promote their growth. When the sun becomes less vertical and intense, the corn is usually topped, and the rays are more freely admitted, so that without purposely favoring the new crop, the operations on the old one, or corn, seem exactly to suit its wants. The corn-stalks, when gathered, should be cut close to the ground, or with a hatchet may be cut a little below, so as to be entirely out of the way of the scythe at the first mowing.

On the subject of seeding and of harvesting, some thoughts occur, but we should be exceeding reasonable limits to speak of them now.

We have said nothing of the grasses for our pastures—and this is a subject, too, which intimately concerns us all. No branch of our husbandry so much requires consideration as this, and we trust it will be the subject of your earnest inquiry and investigation.

"There are many among us who seem to think that the earth is possessed of a constitution so strong, so stout, and so healthy, that no extreme of bad usage can affect it injuriously; but Time, the great instructor, is demonstrating our folly, and warning us to change our modes of farming. While the husbandman carries forward his works of agricultural improvement, he must not forget the injunction, 'Let the earth bring forth grass.' If, disregarding this mandate, he shall continue to neglect the investigation and cultivation of grasses, the annual depreciation of his crops of corn, and other grains, will ultimately qualify him to appreciate fully the force of the Belgian maxim, '*No grass, no stock;—no stock, no manure;—no manure, no crops.*'"

Let us exhort you, then, to a more earnest study of the cultivation of the grasses—their names, their qualities, and the best modes of cultivation. Like rice or the potato for man, so good high-land grass is adapted to all herbivorous animals, and as a general food, will sustain them better than any other. And as so large a proportion of the food upon which we ourselves subsist comes from the grasses, and from the animals which they sustain, we can no longer wonder at another declaration of the same prophet whom we quoted in the beginning, that "Surely the people is grass."

For the New England Farmer.

LIQUID MANURE.

MR. EDITOR:—In your paper of the 12th inst., I read with great pleasure an article on this subject, by Professor J. A. Nash, in which he describes very comprehensively the mode of preparing and distributing liquid manure by some of the first farmers in England, and the success attending it. As the system thus described, however, is on too gigantic a scale for general introduction into this country, I shall here state in a few words as possible, my own experience in such matters.

It has long been a matter of surprise to me, that farmers in this section of the country do not avail themselves more generally of the many advantages to be derived from the proper application of liquid fertilizers, especially as regards the top-dressing of grass lands; as more prodigal waste has taken place in the application of solid manure for that purpose, than in all the other branches of agriculture combined. It is easy to perceive, that top-dressing grass with barn manure, either clear or composted, or any solid material whatever, in common use for that purpose, is less or more dependent on the quantity of rain that may happen to fall immediately after the dressing is put on, in order to produce the desired effect. If that operation is succeeded by very dry weather, little or no benefit is derived from it, and the material and also the labor are lost; and even when heavy rains chance to fall immediately after the process has been completed, only about 20 per cent. of the fertilizing properties of the manure go to nourish the grass; the residue being wasted in atmospheric evaporation. Proof of this assertion is always at hand, if

people would only take the trouble to weigh a load of the solid material intended for top-dressing, in the morning of a dry day before being spread, then at night, after being exposed to the sun, and for only 10 or 12 hours, and it will be found that the diminution of weight is nearly one-half; the liquid and only fertilizing properties of the mass being nearly all dissipated in that short period. Should the drought continue but for a few days longer, not one particle of the fertilizing properties will remain to perform the functions for which they were intended. On the other hand, liquid preparations go immediately to the roots of the grass, and produce almost instantaneous and salutary effects; provided the preparation has been properly fermented, and is of the requisite strength. Liquid manure can be provided on almost every farm, in ample quantities, at one-third the expense of solid, and when properly prepared and applied, its effects are certain; whereas the former is but a game at chance at the best, as far, at least, as top-dressing grass and manuring fruit trees are concerned. Not one practical farmer out of a hundred has given due consideration to this important subject; and it is almost impossible to suppress laughter at the absurdity of many of them purchasing stable manure in Boston and other cities at a high price, and carrying it, sometimes, 20 miles into the country, after it has been denuded of nearly every particle of ammonia and other fertilizing properties, by over-heating in the cellars in which it is collected; while the invaluable liquids in abundance on their own farms are completely neglected; their only use being to produce pestilential effluvia for the comfort of the family during the summer months!

To farmers on a small scale who have not the means to provide themselves with that inestimable convenience of a water-tight cellar under their barns, a simple and cheap substitute is easily provided. That substitute is nothing more than a tank or cesspool, built under ground, of suitable capacity in proportion to the extent of the farm, placed in the most convenient situation for receiving the whole liquid refuse of the dwelling-house, the urine of every description from the barn, and also water from the house pump to dilute the liquor and prevent smell when required. The tank may be constructed of stone, or brick, or even wood, as being the cheapest in the outset. Spruce plank is good enough for the purpose, and comes cheaper than any other material; and, if bedded in clay to prevent it from decay on the outside, the liquor will preserve it in the inside for generations to come. A tank 12 by 6 feet, and 4 feet deep, could be built of this wood, for about \$20, and will hold over 1728 gallons; which is sufficient during the season to supply liquid in abundance to top-dress from 12 to 20 acres of grass land, and increase the quantity of hay in a most astonishing manner. It should have a close cover for the top, part of which, however, should be movable at pleasure, with a view to cleaning out the bottom when required; and in the permanent part a hole should be left to admit a wooden pump, which is essential for discharging the liquid into the distribution cart. Also an aperture for the discharge of the back-house of the family which should be invariably placed right above the cess-pool.

A cart for the distribution of the liquid can be made in different ways. Those used in many parts of Europe for that purpose, are on the same prin-

ciple, and similar in construction, to those used in this country for watering the streets in cities, during dry weather in summer; but one of much easier and simpler construction may answer all useful purposes, to those of small means. A large band fixed on a pair of old wheels, with a spire for oxen or shafts for a horse attached to the axle, is all that is wanted; or the barrel may be placed in an ox or horse cast, as convenience may dictate, with a spout or box behind pierced with many holes in the bottom for the even distribution of the liquid on the grass. With such a cart one man can manure from 4 to 6 acres in a day, which is a great saving in the expense of labor compared with the common practice of top-dressing with composted manure, a topic worthy of some consideration in this frugal land.

In order to derive all the advantages from this mode of manuring grass land, special attention must be paid to the proper fermentation of the liquid before application, as properly fermented, and unfermented liquid, may be compared to strong manure, and no manure at all. Every one at all conversant with the making of wine, beer and cider knows that these liquors require to undergo a certain degree of fermentation before they impart that invigorating and stimulating effect on those that drink them, for which alone their value in proportion to their relative strength is estimated. In like manner does liquid manure operate in all its stages of fermentation; as it has to undergo several chemical changes during that process before it becomes fit food for plants. The next important consideration connected with this undertaking after the fermentation has subsided, is how to fix the ammonia and other volatile matter that the liquid may contain; and how to ascertain when they are fixed. Many substances may be used with good effect for fixing these volatile principles in liquid manure. Any ingredient of an acid nature, if added in sufficient quantity to decomposing urine, fixes and neutralizes the ammonia as it is evolved from the urea and the other nitrogenous bodies of urine; and in consequence very much enriches the ultimate liquid manure. Water, as Professor Nash says, is an excellent absorbent of ammonia, and is in all cases a sufficient deodorizer, provided enough of it is used. This I have invariably found to be correct; and would, therefore, advise a certain quantity to be pumped into the tank every other day in proportion to the amount of other matter it may contain. This will completely subdue any offensive odor that may arise from the fermentation of the liquid, and add considerably to the bulk of the article. Should this course be objected to on account of such quantities of water making the preparation too weak, I would say add guano, night-soil, cow dung, or even green succulent vegetables and many kinds of weeds from the garden and field, to thicken the mass, and bring it up to the proper strength. Before application I invariably use a small quantity of diluted sulphuric acid as a deodorizer and neutralizer of the ammonia; and the surest and safest criterion to judge by, when the liquid is fit for using, is its being destitute of any disagreeable odor when stirred about with a stick from the bottom of the tank. That shows conclusively that the whole volatile principles of the manure are fixed, and neutralized, and prepared for application to the grass or other crops. Any one may see that even water alone put upon grass while in a growing state,

accelerates its growth, often in a very wonderful degree; and how much more may not be reasonably expected, from such a combination of the known elements of fertility, as such liquids contain. With a plentiful supply of such liquid preparations, which are within the reach of every cultivator of the soil, from the small garden to the extensive farm, there is nothing to prevent an increase of the crops of hay and fruit four-fold, at least, if people interested in such matters would give it a fair trial.

I have been a practical cultivator of the soil for over fifty years, in different parts of the world, and it is only within the last five years that I learned the secret of properly preparing and applying liquid manure to growing crops; and since then, I have seen two, three, and even four crops of strong grass cut from the same ground in one season by the copious application of liquid preparations; and for that valuable discovery I have to thank Professor Liebig's familiar letters on chemistry; although deeply opposed to book farming previous to that date.

T. C.

Beverly, West Beach, Jan. 16, 1856.

REMARKS.—We are under obligations to the writer of this article—his suggestions and descriptions will lead many persons to adopt a system for preserving the best portion of the manures of the farm. Will he favor us with an interview?

AGRICULTURE IN MAINE.

Some of the farmers in Maine had a meeting at the State House, on Friday evening, Jan. 18, and from the report given in the *Maine Farmer*, it must have been an interesting and profitable one. There was quite a free interchange of opinions, and among others, the discussion evolved the following:—

"Mr. Carr, of Bangor, said, 'we did not do enough in farming; if it were profitable on a small scale, it would, if rightly pursued, be more profitable on a larger scale.'

If we could demonstrate this, and convince our young men of it, it would induce them to stay here instead of going West, and a great object would be attained.

Mr. Parlin, of Winthrop, being called upon, stated that he was a mechanic, but farmed it on a small scale, he had to hire his labor, he kept a strict account with his farm, and finds, that this year, after paying all expenses, he has \$450 for overseeing the business.

Mr. Butman said he had been a farmer 50 years, labored with his hands, had a sick wife, no sons—no daughters, has had to hire help, and yet had made money by farming; when he bought where he now lives, found six acres of swamp land near his buildings,—not wanting a frog pond there he commenced clearing it, and finally got it in a condition to plow, plowed it into beds, made the dead furrow pretty deep, and then set a man to dig it deeper, on the 13th of June following, hauled on 100 loads of manure and sowed to oats and grass—had 65 bushels of oats per acre, which he sold for 55 cts. per bushel; this paid all the expenses except for manure, then laid it down, and has mowed three tons to the acre; has mowed it ever since, and has cut 120 tons of hay from it during this time. The whole of the labor cost \$28 to the acre.

Mr. Crane did not agree with Mr. Goodale's reasoning; he had been left an orphan, without property, and when twenty-one years of age he had not \$5 worth of property. He had done nothing but farming, and was now out of debt, and the assessors rated him \$5,000, the whole made by farming, and by nothing else.

Mr. Goodale said, one reason why farming is not more profitable is, because the farmer does not use capital enough. In addition to his fixed capital of farm, fences, buildings, &c., he should use working or circulating capital.

What condition would a manufacturer be in, if, after his mill was ready, he had no working capital?"

At this stage of the meeting, Prof. Boody was called on, who said he had been in the western country, and from observations and experiments he had made there, he would say that a young man in Maine need not go to the West for fear there was no profit in farming in Maine. He had no doubt whatever, that if the farmers here would cultivate less land, feed it better, and pulverize it well, it would be a profitable business.

"Mr. French said, twenty-five years ago he went into the woods with a wife and two children, and had but two hundred dollars in the world, bought a farm on mortgage, family increased to nine children, when his son was sixteen and began to be help to him, he died, his buildings were soon after all burnt, the weevil took his wheat and the rot his potatoes; never hired help excepting in haying.

He now had a farm, free from debt, had a comfortable home, had educated 9 children with common school education, had plenty to eat and set before his friends, and he left it to the meeting to say whether farming was profitable or not.

Mr. Hersey, from Lincoln, stated that he did some lumbering business, but farming was his principal business; usually raises 1000 bushels of grain of different kinds, per year, this last year raised 1800 bushels,—800 on burnt and 1000 on plowed land; as near as he can judge his grain costs about one-half what it would bring in market.

Mr. Morrow, of Searsmont, said, the question is this,—is farming profitable, compared with other callings? It is the primary business of the State, all depend upon it. The idea is abroad among our young men that farming is not profitable in Maine. This idea is making against the best interests of the State, it is injuring the community; now if any thing can be done to correct this belief by your organization or by the Legislature, it should be done.

We will suppose a young man, when of age, hires out by the month until he has earned \$1200 or \$1500. The question comes up to him, is farming profitable? How shall he invest this to obtain a living? You can now hardly procure a respectable farm for \$1500, but he nevertheless buys a farm for \$1200, and uses \$300 to stock it with tools and animals. Now can he sustain himself, raise a family, and keep them in comfortable circumstances through life? This is the question—the sentiment is abroad that he cannot, and hence the young men rush into trade, go to California, into the professions, &c. &c. Now he believes that farming can be made profitable; but the farmer must have his farm and stock, and a little surplus capital, and he can then, by proper management, make it profitable."

Many other excellent things were said during the evening, and will have an influence to call out more to attend the meetings, and to turn attention to the subject of higher modes of cultivation. Our object, mainly, in these quotations, is to show the opinions of the speakers with regard to *farming as a profitable avocation*.

For the New England Farmer.

FARM WORK IN THE WINTER.

MR. EDITOR:—The subject of farm work, generally, is one upon which much has been said with profit, and much more needs to be said, particularly by those who can talk from experience. Some farmers can find abundance of work on the farm in the winter, while others can find but little that can be done to a satisfactory profit. Let the result of every one's experience be given through the agricultural press, and at length the experience of each will become the wisdom of all, and a true system be reached.

The New York *Tribune* recommends farm work in winter, and I have great respect for the teachings of the *Tribune*. My friend, L. Durand, of Connecticut, thinks that but little farm work can be done in winter. Allow me, though a plain workman, to give a specimen of my experience, from a region where cold weather and abundance of snow are the usual accompaniments of winter. At the falling of the snow I hauled up a year's supply of wood, and then commenced hauling muck from the muck bed, and shall continue in the business as long as the sleighing shall last, which will probably be until about the middle of March. I find that with one horse, I can average two cords of muck each day delivered one mile from the muck bed.

The muck on the bed is eight to ten feet deep. I remove the snow, and the frozen muck to the depth of about a foot, is cut up and removed from the surface of a pit five feet wide and ten feet long, and then there is no difficulty in shovelling the muck into the box on the sled.

The advantages of getting out the muck in the winter are, that any part of the muck bed can be reached, which cannot be done in the summer. There is a decided advantage in hauling it upon the snow, and when there are no pressing calls for labor elsewhere on the farm. The muck, load by load, gets well exposed to the action of frost, and some advantage is gained in composting it, partially, at least, with stable dung and night soil, so that in the spring I have only to shovel it over once, as it thaws, and it is ready to be used in the drill. There is also an advantage in spreading the muck on the snow as a top dressing for grass lands.

The muck which I hauled out last winter was used last spring, and my crops were highly satisfactory and profitable, so that this is not hypothesis, but experiment and practice.

I might say much on the subject of vegetable muck, (not swamp mud) as a manure, but that matter is perhaps too well understood to require this. My own experience has proved it to be highly valuable.

From this brief statement, I think it must be confirmed that, for me, there is work to be done to advantage in the winter.

MICHAEL.

Bangor, Feb., 1856.

For the New England Farmer.

BRAKES—SAWDUST—MANURES.

MR. EDITOR:—Acting upon the suggestions in your paper, I have "housed" all my manure. I bed all my cattle liberally with brakes and sawdust. I allow my bedding to remain in the stables one week. By this process, the brakes are pulverized, and with the sawdust, become perfectly saturated. The knowing ones tell me my manure will be burnt. What is your opinion? (a.) How shall I manage in the spring when I cart it out? (b.) Permit me to suggest to the readers of your paper the economy of cutting brakes. I put under cover the first year about seven tons of brakes; with my oat straw, and a few roots, and occasionally a little meal, I have kept to the present time nine head of cattle. In many pastures, grass grows with the brake; the cattle will not eat this in summer, but when made into hay and fed out in winter, they readily eat both grass and brake. By yearly mowing, the cane brake gives way to a finer quality, and in time, the pasture becomes entirely rid of them.

Yours truly, "INQUIRER."

Buckland, February 7th, 1856.

REMARKS.—(a.) When there is much coarse vegetable matter there is danger of *fire-fang*, as it is called. To prevent this, a good supply of peat muck should be stored up and mingled with the manure; but if this, or loam, is not at hand, the heap must be watched. As long as it is kept dry, there will be little danger. (b.) A few days before using it, throw it up lightly, wet it, and stick two or three bean poles through it. When you find, upon drawing one of these poles out, that the heap is warmed to blood heat and that it has remained at about that temperature a few days, it will be ready for use; and if it has been covered with loam or muck, will have retained nearly all its fertilizing qualities. Your good example ought to be imitated in cutting the brakes.

For the New England Farmer.

WINTER IN VERMONT.

MR. FARMER:—As so much is said of snow and cold weather from Maine to Louisiana, we fear our friends abroad may suppose that in this hyperborean region we are hopelessly frozen up and buried in snow. To quiet such apprehensions, I will give you a short sketch of our winter.

We had snow early in December, and since, frequent additions, so that now it is full 2½ feet in forests. December was a fine winter month, no extreme cold. January was uniformly cold; 12.09° colder than 1855—8.55° colder than the mean of the last 18 years, but warmer than 1840 or 1844. The mean temperature of three observations daily,—sunrise, 1 to 9 o'clock, P. M.,—has been 13.9°. The lowest points at sunrise was 5th, 13°; 7th, 10°; 9th, 4°; 20th, 10°; 22d, 6°; 25th, 5°; 26th, 6°; making seven days when the mercury has stood below zero.

You can judge of our snow drifts when I tell you that the trains on the Central Railroad, from Windsor over Connecticut river to Burlington on Lake Champlain, have never lost a trip, nor have they

ever been delayed, so as to be more than fifteen minutes behind, making time on this road sometimes late, caused by non-arrival of trains on connecting roads. From Burlington to Rouse's Point, (57 miles) lat. 45°, the trains have not been detained one minute by snow. We have had near two months of uninterrupted good sleighing, and a fair prospect of a month more.

If you are buried in snow in Boston, I advise you to migrate to Vermont. Here you would at all times have found wide paths on our side-walks about town, made by snow-plows, except in the *business* parts; and no day so cold but you might have seen our young ladies walking a mile or more, "just for the fun of it;" and—as to sleigh-rides—in the city you can only imagine what sleigh-riding is.

C. GOODRICH.

Burlington, Feb. 11.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 3.

CATTLE.

I shall now proceed to show how rich English agriculture is in cattle as well as sheep. England possesses the finest milch cow race in those beautiful, intelligent, gentle-looking animals, which go under the name of Alderney, and in the Scotch Ayrshire—that charming race of cows, whose graceful forms, speckled hides, quiet dispositions, large udders, and rich luxuriant supply of milk, realize the idea of pastoral life. She possesses also, the short-horned Durhams—animals which may be fattened as early as two years old, and attain, at that age, a weight which no other breed can arrive at so soon. Their heads, legs and bones, have been reduced to such small proportions, and the more fleshy parts of the body so largely developed, that nearly three-fourths of their weight is meat.

After the Durham short-horn, which, among cattle, is what the Dishley breed is among sheep, come the Hereford and Devon breeds, which, in their turn may be compared to the Southdowns and Cheviots. The Hereford breed follows closely upon the Durham, and is even more generally sought after, as offering almost an equal precocity, and the same aptitude for fattening, but with greater hardiness. The county of Hereford, from which it comes, lies at the foot of the Welsh mountains, and possesses a soil of but indifferent fertility.

The English farmer looks upon cattle, with the instinctive calculation, which distinguishes his class, and argues that there are three descriptions of produce, which man may demand from cattle, besides the manures the hide and the offal—namely, their labor, their milk and their flesh. Of these, he deems their labor the least profitable, and therefore looks chiefly to their meat and their milk.

He demands of his milch cows the greatest supply of milk, and a good Ayrshire cow will give four thousand quarts of milk in the year; and it is reckoned that the three million cows in Great Britain produce three thousand millions quarts in a year—an average of a thousand quarts for each cow. The French cows, many of which are worked, do not average, as a whole, over five hundred quarts a head. To get the greatest quantity of milk from the cow, the English farmer has studied and labored, till he has spread over his fields the finest herds of milch cows in the world.

It appears, at first sight, that the work our cattle are made to go through with, would have but little influence upon the return they give in meat. It might be supposed that this work, since it turned the life of the animal to account, admitted of a cheaper production of meat. But not so argues the English farmer. He believes that habitual labor causes animals to become hardy, vigorous and slow, to eat much and fatten little, to increase in bony structure, make little available flesh and that slowly; that habitual inaction on the contrary, produces a soft, lazy race, which fatten early, assume rotundity of form and fleshiness, and on an equal amount of food, give a better product of butcher meat. The English farmer argues further that where labor is the first consideration, the animal is not killed till it has finished its office; but on the other hand, where meat only is sought, it is slaughtered at that period when it gives most, and that when the breed is precocious, this period comes early—and that thus, by raising cattle for slaughter, he gets the best return for what they consume. The English farmer's reasoning on this matter, is, I have no doubt, right, when he possesses a precocious breed of cattle like Durham or improved Hereford. And this reasoning would be true, in any country possessing similar breeds of cattle, unless the profit of working oxen was greater than it is in England. The results of British agriculture in raising cattle are that Great Britain feeds eight millions of horned cattle—slaughters two millions annually, from which she realizes a hundred millions of dollars for meat alone.

The other species of domestic animals are horses and pigs. As regards horses, the pre-eminence of the English breeders has long been recognized. As for the race-horse and his rival, the hunter, everybody knows by what a combination of effort the English have succeeded in producing and keeping up these superior breeds. They are productions of human industry, real works of art, obtained at a great expense, and designed to gratify a national passion. A fine horse constitutes with everybody the ideal of fashionable life; it is the first dream of the young girl, as it is the latest pleasure of the aged man of business. But the English have breeds for draught, which are equally valuable. Such, for example, are the plow horses, the best of which, perhaps, come from Suffolk. I have already stated that tillage with horses has been generally substituted by the English for that of oxen; they thought, and with reason, that the quicker action of the horse made its work more productive, and that an idle life made the meat of the ox more productive. But they have done more; they have substituted horses for men wherever manual labor—the most expensive of all—could be replaced by a machine set in motion by horse-power. The brewers' horses and those used in coal wagons are celebrated for their strength and bulk. The best fetch very high prices. It is the same with the carriage horses; the breed of Cleveland bays from Yorkshire is reckoned one of the most perfect that exists for average work.

English pigs on an average are not very large; but they are killed young, exemplifying the great principle of precocity contended for by Bakewell, and applied to all kinds of animals destined for food. They are all of breeds which fatten rapidly, and whose shapes have been improved for a lengthened period.

The English rear few fowls, the dampness of

their climate being unsuitable for it, and spite of the efforts of wealthy amateurs, the occupation has hitherto obtained but little favor; whereas in France the annual production of eggs alone is estimated at twenty millions of dollars, and that of all kinds of fowls at an equal sum.

Such are the advantages obtained by British agriculture, from the best breeds and the best management of them, in rearing domestic animals.

I must next show what crops support this animal production of England; for crops are both the causes and consequences of a great production of domestic animals. M.

For the New England Farmer.

THE COUNTY OF ORLEANS, VERMONT.

MR. EDITOR:—I improve the opportunity to make a few remarks with regard to this part of Vermont, which may be of some interest to your numerous readers in other parts of the country.

First, with reference to our winters in particular, and our climate in general. We are frequently amused by the remarks we meet with in one of our newspapers from Cincinnati, Ohio. People there seem to think that the unfortunate people of New England, (Vermont in particular,) live under snow-drifts through a terrible winter, or that spring thaws them from the heart of an ice mountain,—where life is preserved by a miracle. Even the good people of your State seem inclined to pity us in the northern part of Vermont, on account of the terrible cold storms and snows of our winters. Such used to receive my assertions, while I resided in Massachusetts, that the winters in northern Vermont, are less uncomfortable than they are in Massachusetts, almost with incredulity. But, as I have spent more than thirty years of my life in two of the northern counties of the State, and some ten or twelve years in Massachusetts, I think I can make a correct comparison. We know here very little of the searching winds, the deep falls of snow, and the terrible storms to which the eastern part of your State is subject.

During the time in which the great storms prevailed on the 6th and 13th of the present month, in southern New England, *we*, in this county had no idea of anything unusual on the coast. My parishioners are scattered over a considerable extent, but the meetings for prayer, on those Saturday evenings, and the congregations on those Sabbaths, were not characterized by any considerable diminution of numbers in attendance. I reside a mile from our meeting-house, and did not experience the slightest inconvenience in attending with my family. During more than fifteen years, my meeting-house has never failed but once of being open for worship on the Lord's day, and then worship was attended in a smaller room. The *Salem Register*, of a late date, speaks thus of "stormy Sabbaths:—" "The oldest inhabitant cannot remember a parallel to the long series of unpleasant Sabbaths with which we have been visited for the last four months; or, a former period, when for consecutive Sabbaths, our houses of worship had been closed, at least for a portion of each day. Such was the case in this city, on the 6th and 13th of this month, at least on a portion of each day, in consequence of the inclemency of the weather. From the 14th of October, 1855, to the 13th of Jan., 1856, inclusive, embrac-

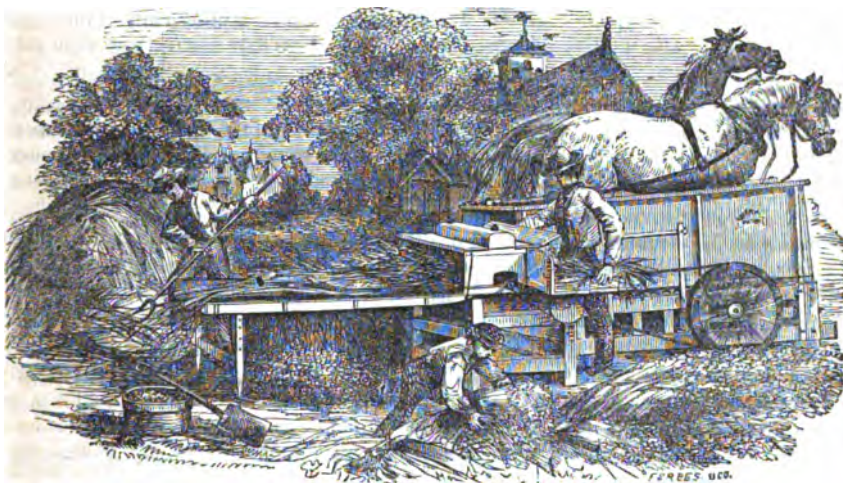
ing 14 Sabbaths, one only was pleasant from morning to night."

In this county, during those 14 Sabbaths, we hardly noticed a diminution of the usual congregations, on more than one or two, on account of the state of the weather. Two only do I remember, which may be said to be stormy, and one of these, only in the morning. Our house of worship is on high ground, and exposed to wind from all points of the compass. Thermometer has been once or twice 21 or 22 degrees below zero, and on usual days, from 2 to 10 below, in this town, but our stages have not lost a single trip, or been delayed much beyond their usual time. The thermometer

has been *lower* in some villages contiguous to streams, in our valleys, though not, so far as I have learned, so low as 30. We have, in all, some two feet of snow in the north part of the county, and probably more than that at the head of the streams which flow in to Memphremagog lake. The town, in which I write is 12 miles south of Canada line, and is generally three or four hundred feet above the level of the lake, or about one thousand feet above the ocean. The weather, thus far, has not been such as to make it uncomfortable to perform out-of-door work, with the exception of a very few days. There has been hardly any interruption to travel.

Jan., 1856.

Yours, &c., ORLEANS.



EMERY'S RAILWAY HORSE-POWER.

The time has been, says the *Rural New-Yorker*, when the implements used in agriculture were of the rudest and simplest construction; when the ignorant hind who used them, possessed an intellect scarcely above the ability to yoke a pair of bullocks to a forked stick for a plow, and to tread out the ripened grain by means of cattle. As civilization advanced, and intelligence became diffused among the people, the agricultural laborer was not slow to avail himself of the lights of science in order to ameliorate his condition. He hastened to adopt improved implements of husbandry, until at length complicated and elegant machinery has superseded a vast amount of manual labor. The horse-power, the threshing-machine, the gang-plow, the mower and reaper, &c., &c., must now be reckoned among the necessities of the farm.

To keep pace with the demand for improved machinery, vast and extended workshops for its manufacture have been erected in various parts of the country, employing hundreds of men, and re-

quiring the investment of a great amount of capital. Among those establishments which have become distinguished, may be reckoned the works of MESSRS. EMERY & Co., at Albany, N. Y. Their manufactory occupies a building four stories in height, built of brick, and the machinery and implements turned out by them are models of their kind. EMERY'S Horse-Powers and Threshers are especially known and appreciated in the grain-growing districts of the North and West. Those of our readers desirous of procuring information relative to, or purchasing, these or other machines manufactured at the above-named Works, will receive prompt and faithful attention by addressing the proprietors as above.

To J. D., WAKEFIELD, R. I.—How's cattle-leader will be for sale at the Agricultural Warehouses soon.

The price of the Cider Mill you inquire for is about \$40.

SIXTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY H. E. ROCKWELL.

The sixth regular meeting of the Legislative Agricultural Society was held on Tuesday evening, the number present being about the same as heretofore. The subject for discussion was, "*Preparation and application of Manures.*"

The meeting was called to order by Dr. FISHER, who invited E. W. BULL, of Concord, to take the chair. He said he did not consider it so much a question how much land a man cultivates, as how much manure is applied. If a hundred loads are applied to an acre, it may be as profitable as to cultivate, a hundred acres, applying one load to an acre. Heavy dressing amends soils, improves their texture, and makes them valuable for a long period of time.

He thought it necessary to ferment manures. He had tried peat muck, by putting two pounds of muck to one of manure, he had found it more fertilizing than manure alone. On a dry soil he did not find it profitable to use unfermented manure, as it would dry up, and its virtues would evaporate. He prepared about forty loads of compost, by mixing peat-mud with the manure of one cow and one pig for a year, by the application of which he obtained fifty bushels of corn to the acre, where he had never obtained more than thirty before.

Dr. FISHER thought something might be said to reconcile the differences of opinion as to using manures in a fermented or unfermented state. Unfermented manures do well on a clay soil when the season is dry. If the season is wet, the manure rather produces acids than ammonia. The importance of using liquid manure, and applying it in a liquid state, was next suggested. For grass, he preferred it to any other form, because, it may be, in that form, thoroughly and equally distributed. He believed that if a cord of manure were leached, and the liquid applied, its effects would be greater than if applied in a solid state. Even to other crops he thought it equally valuable with solid manure. No man is justified in sending to Peru for guano, while he fails to save the liquid manure of his animals; because, as he believed, the liquid manure of every grown animal was worth \$20 a year.

R. S. FAX, of Lynn, thought there were difficulties in the application of liquid manure which should be better understood than they generally are, before they can be relied upon. The application of liquids should not be made to plants until they have acquired some degree of growth, in order that it may be immediately taken up by them. It may be applied in such a way as to destroy the crop. Liquid manure of the strength of urine, should receive from five to ten times its bulk of water. If it is applied in a hot sun, much of its ammonia is evolved in the air. It is better therefore,

to apply it in wet, rainy weather. There are so many circumstances to be considered in its use, that its application is quite difficult. He had seen an entire farm in Ayrshire, Scotland, of a hundred acres, manured by liquid manure. The crops were very large. On another farm, it is said that five cuttings of Italian rye grass were taken in a season, the whole of which produced at the rate of seventy tons per acre. He considered the story too large to be told generally, and he was in the habit of saying thirty-five tons instead of seventy, in order that it might seem more credible. He had seen one farm of forty acres thus manured by irrigation. About two acres were cut at a time, and immediately after cutting, a quantity of the manure was made, by machinery, to flow over so much of the field. Then two or three acres more were cut, and the manure applied upon it in the same manner as before. Thus the whole field was cut and manured, a little at a time, five or six times in a single season. By this process the grass will become eight inches high, in three or four days. The *mode and time of application* of manure is of the utmost importance. He then referred to the practice in Belgium. They there cover manure, at the time of its being put upon the ground. The manure made in the summer is put in the ground in the autumn. It there assimilates with the soil, and is ready for use in the spring. So the manure made in the winter should be composted in the barn cellar in order to make it fit for use in the spring. With those two simple principles, he thought farmers could not go very far wrong, in applying manure.

B. V. FRENCH, of Braintree, followed. He did not believe farming could be carried on with any profit without manure. Even where lands are rich, there will come a time when manures must be applied. According to Dr. Dana, a cow will make a bushel of manure in a day, by mixing the droppings with muck or some similar substance. About seven cords of good manure may be made from a cow in a year, by saving and composting all the manure. When a farmer has made all the manure he can, he might still use more to advantage. He preferred applying the manure to the soil and plowing it in, to composting. In order to show of how little value fermented manure may be, he stated that he applied five cords of fine manure which had been fermenting two years, upon one end of a lot, six rods wide, and fifty long, and plowed it in. He then spread long manure over the whole field, equally, but he found no advantage from the five cords plowed in, that part of the field producing no better crop than the other. It was an entire failure, as he never saw any benefit from it in the first, second, third, or any future crop. On a field of poor land he applied three hundred pounds of guano to the acre annually, and had found its results very good for three or four years, in producing rye.

The application of liquid manure he thought might be of great advantage in a very diluted state. He wished farmers could agree as to the manner of applying manure in the best way, when that way is discovered; and it was important to experiment, and record and compare experiments in order to arrive at the desired result, which was of more importance to them than the commerce of the State.

The Chairman repeated that his own experience satisfied him that unfermented manure upon a dry sandy soil was not of much value, even if it was not entirely lost. He would certainly never apply raw manure to such a soil in the spring, though it might do better in the autumn.

MR. FRENCH stated that in the application of guano he had found it necessary to have it pulverized and spread when there is no wind blowing, and better still if rain is falling. He thought it better to put the manure into the soil at a proper depth, than to compost it, as the labor and expense of composting is thus saved.

MR. FAY was disposed to be modest in disputing the experience of the Chairman as to the effect of long manures on a sandy soil, but he still considered it well to cart out such manure in the fall and to plow it in, and he was confirmed in his opinion by the view of MR. FRENCH. Whatever manure might be put upon a sandy soil, and plowed in, would be retained until it was taken up by plants. There might be a good reason for the failure of MR. FRENCH to obtain any benefit from the manure which he applied to his piece of six rods in width, in the fact, that the land was sufficiently rich without any manure, or, that by the application of the general coating which was spread equally over the whole, it had become so.

MR. COOLEY, of Conway, gave the result of his experience in the application of long manure to a sandy soil. His farm was upon a river bottom, having a sandy loam of two feet in depth upon a substratum of gravel. When he went upon the farm, much of it was so poor that it would produce scarcely anything, not half a ton of hay to the acre. For the purpose of fair experiment he plowed up a hundred rods, and got from it without manure three bushels of buckwheat. The next spring he put on eight loads of long manure and planted to potatoes and hoed twice, getting for a crop forty bushels. The next year nine loads of long manure were applied, and potatoes again planted, and the crop was eighty bushels. The third year ten loads of manure were used, and one hundred and fifty bushels of potatoes were harvested.

His practice with regard to his corn land was to put twenty-five loads of long manure to the acre, and plow it in, about eight inches deep, and then from ten to twelve loads more to the acre are put in the hill, and from seventy to eighty bushels of corn are obtained uniformly. He would not plow deeper than eight inches.

MR. M. M. FISKE added his testimony to the value of liquid manures. He did not believe in composting. The expense might be saved by putting the manure upon the land and plowing it in, and equally good results might be obtained. He had never seen any good results from the use of lime, but he knew that long manures, plowed into a gravelly soil, were beneficial. The great want of New England soil was the application of vegetable matter as a fertilizer.

MR. FREDERIC EMERSON, of Boston, thought that lime was valuable upon soils that were moist, and where there was iron in some form, in connection with an acid condition of the water. He thought farmers needed to know the results of the application of particular crops, and he gave his own experience in a single instance. He cultivated a small piece of land which had once been a garden, and was consequently rather fertile, with beets and carrots. Both the beets and carrots were sown in drills about two feet apart, and nearly at the same time, the beets occupying half of the land and the carrots the other. No manure was put upon the piece with the exception of the adjacent rows of beets and carrots—one of each,—which were two feet from each other. To these an equal quantity [the exact quantity not specified] of superphosphate of lime was applied, being put into the drills when the seed was sown. The yield upon the whole piece was fair, of each crop; but the adjacent rows told something in the experiment. The rows of carrots which had the superphosphates of lime applied, produced one-third less than any other; and the row of beets, treated the same way produced one-third more than any other row, thus showing that superphosphate of lime is good for beets, but bad for carrots.

The subject for discussion at the next meeting is "Agricultural Education," and a lecture on this topic will be given by G. E. WARING, Jr., of New York State.

[We believe that seven farmers out of ten in the States, may save more than the cost of this paper for one year, by the careful perusal of the above remarks on the *application of manures*. We believe the doctrine sound, and now certainly sustained by high authority, that the sooner manures are applied to the soil and plowed under, the more valuable they are. In winter we compost because we cannot plow under.]

COINING BY AIR POWER.—All the gold and silver coins of England are struck by atmospheric pressure, or in other words, the air we breathe coins money. By a complicated arrangement of pneumatic valves, levers, springs, and other mechanical appliances, the air is made to exert its vast weight in rapid alternations upon a series of pistons, which, again connected with the coining presses, carry down the dies upon the pieces of metal to be coined with unerring precision and force.

For the New England Farmer.

"HOW TO RAISE COLTS."

MR. EDITOR:—In your paper of the 19th inst., I find some important inquiries under the above heading, to which "*A Subscriber*" requests an early answer, through the columns of the *Farmer*. As I have for several years been a subscriber for the *Farmer*, and have not *directly* contributed to its columns; and, having had experience in relation to the subject matter of "a subscriber's" inquiries—I offer the result of my experience and observation to the consideration of all those of your readers who feel an interest on this subject.

I shall not attempt to answer the inquiries of "a subscriber" in the order in which he has placed them, but will endeavor to make myself intelligible on the whole subject. It is no damage, either to a mare or the colt, to work her moderately up to the day of her bringing forth; and regular exercise is beneficial.

After she has foaled, the mare should be allowed to rest for one week; meanwhile, she should be handled every day, so as to accustom the colt to meet you without fear.

After the first week, the mare may be worked regularly; but care should be taken that she neither become weary, heated, or thirsty; under these restrictions, no harm will arise, either to the mare or her colt.

Colts may be weaned at any age, as well as a calf or a baby; and they should be at once, if it is required that the mare be put to hard work; but in such cases, there is danger of injuring the mare. It is generally best to wean a colt the latter part of September, without regard to age. Process—confine the colt in the barn where there is no chance of injury by *trying* to get out, and remove the mare to such a distance that neither can hear the other's call. Visit the colt several times the first day, handle it firmly but kindly each time. At night, give it two quarts of new milk, from the cow; selecting the cow that has most recently calved, and whose milk is poorest for butter. The next day, and onward, feed three times a day, from the same cow. After two weeks, milk of twelve hours standing may be used; and in one month, sour milk is just as good as any. While confined, the colt should be constantly supplied with fine hay and mellow apples; and may be suffered to run about the yard as soon as it becomes fond of you, which will be in a few days. They make the prettiest pets in the world.

It is no damage to the mare to give suck through the winter, under favorable circumstances. As a general rule, I prefer weaning in September, for the following reasons—1. It is favorable to the mare; the feed being short and dry, and her milk scant. 2. It gives her time to recover from the effects of her milk before winter. 3. It is the most convenient time to learn the colt to stay contented and alone. A lesson of great importance.

Milk may be given colts while you have it to spare, and then substitute swill. I have now eight colts, three years old and under, each of them as glad to see a pail of dish-water or pot-liquor as a shoat.

I believe roots are valuable food for colts of any age. Oats or grain of any kind should not be given before they are fit for the harness; unless, by some means the colt is pining, and then roots or milk are better.

I do not believe it an advantage to keep colts "high;" give them such food as will develop healthy bone and muscle; and, though they will not get their growth as young, they will ultimately grow as large, and have far more *stamina*; and are much less liable to accident.

It is generally a matter of economy to halter-break colts while running with the dam. This may easily be done by fastening them—either by strap around the neck, or halter—to the breast of the harness, giving them a chance to go either side, or in front of the mare, when in harness.

If the mare is flush in milk at the time of weaning, special pains should be taken lest her health suffer in the change.

I have uniformly found my colts, when weaned as above directed, gain in flesh, even within ten days.

PHINEAS FIELD.

East Charlemont, Jan. 21, 1856.

REMARKS.—We have never had the pleasure of raising a colt, but believe the course suggested above will lead to the best results. Too many of our horses are injured or spoiled before they arrive at four years of age. We shall be glad to hear from Mr. FIELD again.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 4.

CROPS.

I come now to consider the crops of English agriculture—the causes and consequences of the great animal production of England. The object of all cultivation is to produce the greatest quantity of human food upon a given surface of land. This object can be obtained by several different means. We say, naturally, that wheat is the most desirable human food, and therefore, we will sow wheat. But the English farmer, after a careful consideration of the whole subject, and the climate, says no, to the proposition to sow wheat on his land—"I must take a more circuitous course, and pass my land through other crops, before I sow wheat: for, in northern climates, one great drawback attends wheat; it exhausts the soil which bears it. It is true there are certain favored lands capable of producing wheat almost uninterruptedly, and where land is plenty and population scanty, wheat can be grown on the best soils, and then they can lie fallow; but a period at length arrives, when land too often required to bear wheat refuses to do so. It is impossible for me to take many wheat crops from my land; but my land affords spontaneously an abundant growth of grass for cattle."

On these two facts, to wit, that wheat exhausts his soil, and that his soil spontaneously grows grass, the English farmer builds his system of agriculture—or, I may say, his indirect and circuitous method of raising wheat. The spontaneous grass invites the feeding of cattle—the manure of cattle is the best agent to renew the fertility of the soil, after the exhaustion of a wheat crop. The argument is simple. The more cattle I feed, the more manure I have; the more manure, the greater the richness of the soil, and the production of wheat.

At first, the English farmers contented themselves with natural pastures for their cattle, and upon this

system one-half the land remained in pasture, and the other half was divided between wheat and fallows. But, by-and-bye, the idea of the cultivation of certain grasses and roots exclusively intended for the food of cattle suggested itself, and the fallows were reduced by this cultivation. After a time, the land given to wheat and oats was reduced, and more given to grass and roots, till a fifth of the soil only was given to oats and wheat. Thus the cattle increased, but the harvests of wheat and oats increased also, on a diminished breadth of soil, owing to an increase of manure.

Finally, through the genius of Arthur Young, the cultivation of England settled down into the Norfolk system, so called, of the rotation of crops. Half the cultivated soil is maintained in permanent grass—that composing what is called arable land, is put the first year, in roots, turnips or potatoes; second year, in oats or barley; third year, in artificial grass and clover; fourth year, wheat. For example, upon a farm of 175 acres, 75 would be in permanent grass—20 in potatoes and turnips—20 in barley and oats—20 in clover and 20 in wheat.

In this consists the whole system of English farming. A large extent of grass, whether natural or artificial, occupied for the most part as pasture,—two roots, the potato and the turnip—two spring cereals, barley and oats, and a winter one, wheat; all these plants linked together by an alternating course of cereals with green crops, commencing with roots which require hoeing, and ending with wheat. And the English have established this agricultural law, that to reap largely of cereals it is better to reduce than to extend the breadth of land sown; and that, by giving the greatest space to the forage or green crops, not only is a greater quantity of butcher's meat, milk and wool obtained, but a larger production of wheat also.

The extent of pastures is certainly one of the most striking features of British farming. Comparatively little hay is made in England, the winter food of cattle being chiefly obtained from the artificial meadows and from roots. Three-fourths of the English meadows are grazed, and as one-half the artificial grasses are also, and as turnips are, to a great extent, eaten off the ground by sheep, and as the uncultivated lands cannot be turned to account except in the shape of commons, two-thirds of the whole soil are thus given up to live stock. In this consists the peculiar charm of British fields. A land has a smiling aspect, whose greensward is depastured by fine animals, at large.

The system of pasturage has many advantages in the eyes of English farmers. It saves manual labor, is favorable to the health of animals, admits of turning to account lands, which otherwise would give but small returns, and which are, in course of time, improved by the deposits of the cattle; it supplies food always springing up afresh, and the sum of which is found, in the long run, to equal, if not exceed, that which would have been obtained by the scythe. Great importance is, therefore, attached to having on every farm a sufficient extent of good pasture. No where has the art of improving meadows and pasture lands been carried to such extent as in England; they have been rendered sound by draining, fertilized by irrigation, manuring, subsoil plowing, and improvements of every sort, for the encouragement of nutritious plants and the destruction of weeds.

The turnip crop is the starting point of the Nor-

folk rotation; upon its success depends the rest of the course. Not only is it capable of insuring the succeeding crops, from the abundance of manure given by the number of cattle it can feed; not only does it produce much butcher's meat, milk and wool, from the quantity of food it supplies for all domestic animals; but it clears the land, by the frequent dressings it requires, and by the nature of its growth. The English farmer spares no pains on his turnip crop; to it he gives almost all his manure, the most thorough weeding and his most assiduous care. The turnip requires a light soil and wet summers, and England has both.

Such are the results of the crops we have mentioned in the English system of agriculture, that the British Isles produce more food for cattle than the whole of France with twice the extent of acres. The quantity of manure is proportionally three or four times greater in England than in France, yet this mass of manure is not considered sufficient. Everything fitted for increasing the fertility of the soil,—bones, blood, rags, oil-cake, the refuse of manufactories, all kinds of animal and vegetable waste, gypsum and lime, are assiduously collected and put into the ground. Ships go in quest of guano—chemistry works to discover new manures, and a round sum, every year, figures in the farmer's accounts, for the purchase of fertilizing manures.

Land requires not only manure and fertilizers, but it must be dug, pulverized, levelled, weeded, drained, worked in every direction, so that the wet may pass through without lodging, be rendered pervious to the atmospheric gases, in order that the roots of plants may strike down and extend themselves. A host of implements and machines have been invented in order to facilitate these various operations, which economize labor and supply the place of a large number of hands. These filled a large space at the great exhibition.

Gardens and orchards occupy, as compared to other countries, a small space in England, and their produce is much inferior to ours. The English are not great consumers of fruit and vegetables; and they are right, for both the one and the other with them are very tasteless. All their eating as well as production, is confined to a few articles obtained in great abundance. In fact, the national genius of England, in agriculture as well as manufactures, and everything, aims at quantity in uniformity—in agriculture it produces two or three large crops upon a large scale by great simplicity of means; in manufactures, it produces the great staples of woollens, cottons and iron; in food, it delights in beef and mutton, and the potato, followed by crackers and cheese, while the French genius in all these things and others, aims at quality in variety.

Let me ask here a few questions. Have we any system of agriculture in New England? I think the answer must be, we have none. Probably sufficient capital is not yet applied with us to agriculture to develop one; probably neither labor nor capital are yet cheap enough with us to be so applied; perhaps until within a few years, the markets for farm produce with us have not been high enough to demand a good agricultural system. Shall we ever have one? I think so. The fertile West is against us. But the cost of transporting farm produce from the West is large. The markets, which our manufacturing, mechanical, city and town

populations will afford for farm produce, will call for a New England agricultural system. What will it be? New England minds will work out that question. But is it not clear that before we have, or when we have a system of our own, we must so far, follow England, as to have a race of sheep of our own, of which meat will be the chief and wool the accessory product, and which will produce a large weight of meat at an early age? Must we not have, also, a good and fixed race of milch cows—a precocious race of cattle, giving a great weight of butcher's meat? Must we not have a fixed rotation of crops? Must not the culture of roots be a part of it? Must we not feed many cattle, and have much manure to make our agriculture profitable? Must we not, in one word, study, though we may not adopt the English system? M.

For the New England Farmer.

MEASUREMENT OF CROPS.

The uncertainty and want of uniformity, in the different modes of determining the quantity of produce on a given quantity of land, makes it very desirable that some uniform mode of measurement should be adopted.

Take for instance Indian corn, a crop more extensively cultivated than any other. This crop is usually estimated by the bushel. But what is a bushel? The statute defines it to be a measure containing a certain number of cubic inches—and it further prescribes the number of pounds a bushel shall weigh. These would seem to be limits sufficiently precise:—but experience shows that corn gathered before it is fully ripe, will shrink from twelve to twenty per cent. before it is fit for use. It is common in some places, Plymouth County for instance, to select out a part of a field that will yield an average product of the whole, and to mark off an exact rod, and to gather the corn that grows upon this, and to multiply this by 140, and thus ascertain the quantity upon an acre.

A few years since, 75 lbs. weight in the ear was estimated a bushel; of late 85 lbs. green corn in the ear is estimated a bushel. It is apparent that all such estimates must be essentially modified by the kind of corn raised—the state of dryness when gathered and weighed—the size of the cob—always supposing the purpose of those measuring to be equally honest.

Remarks of like character will apply to almost every variety of crop grown. I would respectfully suggest, that some definite and certain mode of measurement should be prescribed, either by the Board of Agriculture or by the Legislature, and that the same should be required in all the counties of the Commonwealth that presume to use the money of the State *as rewards of culture*. ESSEX.

Feb. 19, 1856.

REMARKS.—This should be done—but who will attend to it if "Essex" does not?

☞ The WOOL GROWER AND STOCK REGISTER, only fifty cents a year, T. C. PETERS, Editor, published at Rochester, N. Y., is the best work, devoted to sheep husbandry, in the country. It is printed well, handsomely illustrated, and all right.

For the New England Farmer.

ORNAMENTAL GARDENING.

I understand "Ornamental Gardening" to refer to that department of rural affairs which relates to the laying out, arranging and embellishing of grounds. It is beginning now to be pretty generally understood that the farmer may have a home that shall be extremely attractive. The means are within the reach of the humblest, if he have the taste.

Suppose the house to be located a little back from the highway, it is out of the dust, and safe from the gaze of the staring traveller. Is there not land enough in the world, that a few rods may be allowed for ornament in front of one's home?

It seems in accordance with good taste, that the grounds in front of one's house should be occupied with *ornamental trees and flowers alone*. A mistaken practice is to introduce almost every variety of fruit in beautiful confusion. But the foreground in the home picture is like the parlor in character. It should be neat, clean, trim—as elegant for the guest to walk through as the parlor to sit in. Now, fruit trees will not permit of the neatness and order that can be maintained with forest trees. Fruit trees require *always* that the ground should be cultivated and annually enriched. Forest trees, when once growing vigorously in decent soil, allow of an unbroken turf—Nature's own beautiful carpet. Fruit trees do not admit of such shapes as are natural to forest trees. They scatter blossoms over the ground in Spring, and in Autumn, litter the ground with imperfect and decaying fruit. The limbs bend and droop over needed avenues, to be propped by fence rails, or old slabs.

It is best to have forest trees by themselves, and fruit trees together, also. An elm will dwarf any fruit tree in the vicinity, and is an expense and an annoyance in cultivated grounds anywhere. By the roadside, in lanes, and public squares, it stands unrivalled as the proudest of trees. The sunny side of one's home, it stands the most grateful of guardians; so tempering the scorching heat of the summer's sun that the dwelling is deliciously cool through the day, and is a place for rest at night, instead of an heated oven to suffer in.

When the cold weather comes, and the sunshine is needed for health and comfort, the elm flings down its awning and waits for the right season to get up a new one.

Now instead of planting deciduous trees (those that shed their leaves in Autumn,) on the south side of the house, some mistake by setting evergreens. These afford a poor shade in summer, when the sun is nearly vertical, and obstruct the desired warmth and light when the sun runs "low."

It is very obvious where evergreens belong. Their place is *on the north side of a dwelling*. There, their thick lower branches check the fury of the cold winds, and are a great protection.

I do not mean by any means to exclude *fruit trees* from the grounds, but these should occupy a compact, regular lot by themselves. They may occupy and become a part of the kitchen-garden; not of minor importance to the forest trees, but only occupying, like the kitchen, a more retired position.

I have spoken only of trees. They are to the *face of Nature*, what the human hair is to the wearer,—an ornament and a defence.

W. D. B.

Concord, Mass., 1856.

EXTRACTS AND REPLIES.

YOUNG PEAR AND PEACH TREES.

MR. EDITOR:—I should like to inquire through the medium of your valuable paper, where I can obtain a few thousand pear stocks, and at what price; wishing to set that amount out the coming Spring. Also, where I can buy some young peach trees.

Danvers, Feb. 20, 1856. A SUBSCRIBER.

HOW TO RAISE COLTS.

If I had a good colt, I would take him from the mare at four months old, and feed him in the barn. If in warm weather, give him good room and air, and some green food daily. If late, I would give him half a pint of oat meal with a quart of cut carrots, and continue this through the first winter to keep him in good flesh and growing. I would lead him to water and let him play. After this, with a decent chance, he would take care of one, no mistake, without grain, till he came to work. I reckon this better for mare and colt, than remaining longer together.

DO POTATOES MIX.

In answer to A. Pixby, permit me to say, potatoes never mix, any more than beets, carrots or turnips, by the roots growing in proximity. I have planted different kinds in my garden, and I have taken the balls from one kind, and then raised as many kinds of seedlings, as there were different varieties of potatoes in blossom, and also some hybrids. I once planted the kidney potatoes alone, and took the balls and planted to renew them, and my seedlings were of only one kind, the kidney, which afterwards produced abundantly and very fine quality. I consider it an established law of Nature, that *like produces like*, and that the hybrids in animals, fruits and vegetables, are the consequence of mingling different species. We might raise every variety of fruit without budding or grafting, could we get the *unmingled seed*.

For many years I raised and sold the finest variety of peaches and peach trees, the product of one tree standing alone, till I procured other kinds for the sake of variety, and set out in the same garden, when lo! I had no more of the kind pure, but hybrids enough in my nursery, raised from the pits of this same tree. I have had the same experience in apples.

BENJAMIN WILLARD.

Lancaster, Feb. 12, 1856.

FISH FOR MANURE.

MR. EDITOR:—Can you, or any of your correspondents, give me the best method of applying fish to the land, as a manure for corn; they are very extensively used in this part of the country; some prefer to spread them on broadcast and plow them in immediately; others, to stack them with dirt and sand. We get them during the month of May. By giving your opinion upon this subject, I shall be much obliged.

G. W. P.

Little Compton, R. I., 1856.

REMARKS.—Personally we have no experience in the use of fish manure, but have often heard opinions of it expressed, and have seen lands dressed with it. It adds great value to the compost heaps of the barn-yard, and when mingled with them in moderate quantities, will decompose and not be

come particularly disagreeable during the process of decay. It is said that by making an excavation in the earth—according to the amount of fish it is desired to work over—filling it with fish and covering it with peat muck or loam, that in a few days it will become soft. It should then be wet with diluted sulphuric acid, and the muck, sand or loam, stirred in with it. Then the whole may be removed, and the same process gone through with a fresh supply.

They are excellent composted in alternate layers of leaves, peat muck, loam, pulverized charcoal, or even saw-dust. Excellent plowed under in a crude state. Excellent when four are laid around the hill and covered up when the corn is planted, and excellent dug in, in moderate quantities around fruit trees, say three to ten feet from the tree, according to its size.

TALL TREES.

I saw accounts of some large trees in your paper last week, and read them with interest. I cut a Rock Maple from my woods the 14th inst., which is less than two inches in diameter and measures 41 feet in length. A Pine less than 3 inches diameter, 45 feet.

We don't boast of our large trunks, but we stump the readers of the *N. E. Farmer* to measure poles with us in Vermont.

BENJ. F. WHITTIER.

Hartford, Vt.

FLOWING CRANBERRY MEADOWS—PRUNING.

MR. EDITOR:—Will spring water have the same effect when used to cover cranberry vines in winter, as common river or rain water? Or will the spring water so used be an injury to said vines? (a.) What benefit is derived from the top-dressing with sand on peat or swamp land for the cultivation of the cranberry? (b.)

What month is best for pruning old apple trees? (c.)

T. C. KINGSLEY.

Allenton, R. I., 1856.

REMARKS.—(a.) We have no doubt that spring water will answer all purposes for flowing a cranberry meadow.

(b.) As a general thing, wherever we have found a luxuriant growth of cranberries, we have found sand, usually white sand—within six to twelve inches of the surface. This has led us to believe that the cranberry plant requires considerable sand, and that, therefore, it will not flourish well on meadows composed, or nearly so, of pure vegetable matter. Hence the benefit of sand when applied to a peat meadow. The sand coming in contact with some salt, which acts as a base, is dissolved, and is then ready to be taken up by the roots of the plants. It has the effect, on meadow lands, to make herd's grass and red-top stand up, by coating the surface of the stem with a substance which is brittle and almost as hard as glass.

(c.) Prune in mid-summer, or in October or November. Not in March or April, unless you wish to spoil your trees. And when you prune, cover

up the wounds you make, as carefully as you would your finger if a piece of it were cut off. See a recent article by "N. T. T." on this subject.

WHITEWASHING ROOFS.

MR. EDITOR:—I should be pleased to have your opinion, or the opinions of some of your numerous contributors, on the practicability of whitewashing the roofs of buildings. Would not whitewash be as good a preservative for the roof, as for the sides of buildings? Any one will confer a favor by answering the above, through the columns of the *New England Farmer*.

Yours truly,
ORRIN P. ALLEN.
Proctorsville, Vt., Jan., 1856.

REMARKS.—Would not the whitewash lodge on the ends of the shingles, and prevent the water from running off readily, and thus cause them to decay? It is said that shingles, painted after they are laid, have this effect, and do not last so long as those unpainted, unless they are dipt in paint, or painted on both sides before they are laid.

A TALK OF PLUMS.

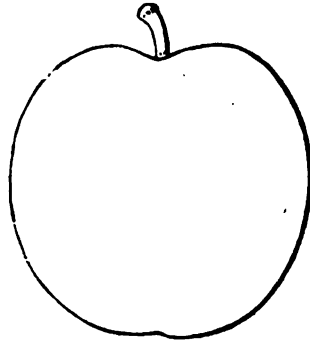
Few fruits are more beautiful on the tree, or more tempting in the dish, than plums. As a dessert, they are every where esteemed, and are extensively used as a preserve, and in either form, taken moderately, they are wholesome and nutritious. The beautiful about us adds something to our happiness, if our tastes are rightly cultivated, as well as a ministration to our physical wants; and what can be more attractive than a small, well managed plum orchard near a favorite window, or in a sunny spot of the garden, where the rich, dark red of the Golden Drop, the faint green of the Imperial Gage, the golden yellow of the Jefferson, or the pale crimson of the Washington, gleam in the sun, and reflect their colors upon each other! How delightful to lead your friend, unexpectedly to him, where plums in variety hang in clustering profusion, and invite him to gather at will of those ready to drop with fulness and perfection! The work of your own hands, too, the result of odd moments, a few at a time, when the body required a little exercise, and the mind a change of scene and employment. "So the plums cost me nothing, air; indeed, they are more than clear gain; for in cultivating them, I cultivated my own mind for a love of the beautiful and useful, and awoke new emotions of gratitude and love. Fill this basket, sir, and take them to your wife and children."

Plum trees are hardy and easily cultivated, and are suited to our climate, unless the black wart is a climatic disease. They flourish better, however, on soils that are rich loams, than on rich sandy soils. Of late years, thousands are deterred from setting plum trees by two discouragements—the *black knot* and the *curculio*. The first is destroying them in large numbers, and no remedies seem yet to have

been discovered that will prevent it. Many have been suggested, but their efficacy has not been uniform. The *curculio* continues its work only for a short time, and may be prevented from doing much mischief by the timely application of fine lime, ashes or plaster, sifted over the young fruit as soon as it begins to form, and continued twice or three times a week, for a month.

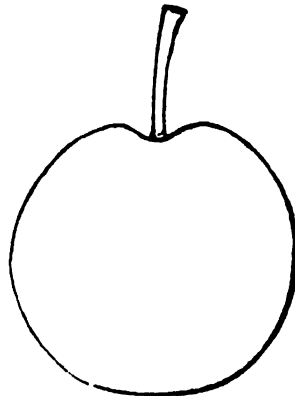
Below we introduce four well established varieties, either of which is worthy of a place in the garden. Other varieties, equally as good, perhaps better, we may speak of, and illustrate at another time.

LAWRENCE'S FAVORITE.



Rather large; roundish, slightly oval, with flattish ends; yellowish-green, clouded with darker streaks, light greenish bloom, at full maturity brownish blotches and reddish specks around the stem; stalk short and slender, in a small cavity; flesh greenish, melting, very juicy, of a brisk, delicious, vinous flavor, resembling and almost equal to the Green Gage, and larger. Almost freestone. Last of Aug. to Sept. 15. Vigorous, upright growth; moderate bearer. Originated by Mr. L. U. Lawrence, Hudson, N. Y.

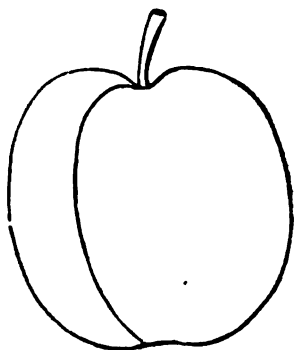
PURPLE GAGE.



Medical; roundish, flattened at the ends, shallow suture; skin rather thick, violet, yellow dots, blue bloom; stem nearly an inch long, rather stout; flesh yellowish, rather firm, of a rich, sugary, high, luscious flavor, almost equal to Green Gage. Freestone. Aug. 25 to Sept. 25, and lasts through the

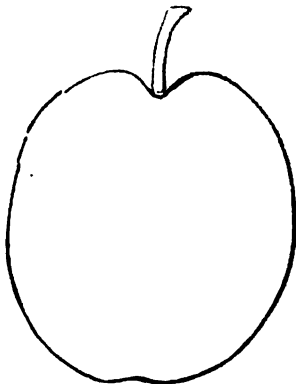
month. Fruit very hardy, hanging long on the tree, shriveling slightly. Excellent for the dessert and for preserves. Great bearer. Foreign.

IMPERIAL GAGE—PRINCE'S IMPERIAL GAGE.



Large medial; oval, distinct suture; pale green, with a yellow tinge, and clouding of darker green, thick white bloom; stem medial, in a moderate cavity; flesh greenish, melting, very juicy, of a rich sprightly, delicious flavor. Mostly freestone. 1 to 15 Sept. A vigorous grower and prodigious bearer. Dark shoots and leaves. Fruit rather inclined to rot. Adapted to rather dry soils. Native of Flushing, N. Y.

SMITH'S ORLEANS.



Large; roundish-oval; broadest at the base, distinct suture on one side; reddish purple, azure bloom; stem short, slender, in a deep, narrow cavity; flesh yellow, rather firm, juicy, of a sprightly, vinous flavor. Clingstone. Sept 1 to 20. Tree hardy and vigorous, and adapted to various climates and soils. Very good for market. Rather inclined to rot, when hanging very thick.

Cole's Fruit Book.

CORRECTION.—Our attention has been called to an omission in the report of the transactions of the U. S. Agricultural Society, at its late meeting at Washington. The name of FREDERICK HOLBROOK, as Vice President for Vermont, was not given. The error probably occurred in changing the arrangement of the names from one solid column, as we found it, into two columns, as it stands in our paper.

For the New England Farmer.

PLANTING PINES.

MR. EDITOR:—As I am intending to plant out and raise a few acres of *white pine* timber, I wish to learn the best method of propagating the same from the seed, and also the best method of nursing and cultivating the trees. I have several acres already of this valuable timber growing, (indigenous,) on land formerly covered with hard timber, and is about twenty-two years since it was first discovered, probably the first year of its growth. These were but small bushes in 1839. I had them trimmed up and thinned out a little at that time, and have thinned them out for fire-wood occasionally since, and the quantity and value of the timber, aside from its beauty, is far greater than it would be, if the first growth had been allowed to stand till now. Any suggestions by you or any of your correspondents in relation to this subject will be duly appreciated.

JOHN M. WEEKS.

West Farms, Salisbury, Vt., Feb. 15.

REMARKS.—Last summer, during a visit to the Cape and Martha's Vineyard, we saw many acres covered with young pines under cultivation. We are not able to state the process, but have no doubt that brother PHINNEY, of Barnstable, will enlighten us with the whole story, through the *Patriot*, which we shall be happy to spread before our readers.

For the New England Farmer.

PLAN FOR A CHEAP SUMMER HOUSE.

MR. EDITOR:—In answer to the inquiry of Mr. Hill, of Yarmouth, in the last *New England Farmer*, for "a plan for a small and cheap summer-house, upon which vines may run, and in an unpretending garden," I will state the course adopted by myself, a few years since, to obtain such a summer-house. Having occasion to use about one hundred white cedar posts for fencing, I had the bark carefully stripped off and laid aside for an experiment in rural architecture. This I proceeded with in my own way. I set in the ground at one side of my garden four red cedar posts, about ten feet long, leaving say seven feet in length above the surface. These were set about eight or ten feet apart, in the form of a parallelogram, and were the posts of my summer-house. I then nailed pieces of rail around the top, for the plates of the roof, and on two sides fastened the ribs for the same, made of strips of board, and across these ribs longitudinally nailed other strips. I had thus a stiff frame for a roof, which I proceeded to cover with the broadest strips of the bark, nailing them on up and down, in the old style of boarding roofs. The roof has a sharp pitch, and a projection at the eaves of a foot or more. On three sides of the house I formed a door-way, or open space, by setting smaller posts in the ground, and nailing them at the top to the plates. Pieces of board were nailed cross-ways for ribs, leaving the open spaces for door-ways on the front and sides, and running entirely across the rear part of the building. These ribs were then covered both inside and out with the bark, being nailed on in strips lengthwise.

I thus made myself a very cheap and pretty summer-house, around which have been planted the various climbing roses, and which, in time, I hope to

see enveloped by their foliage and flowers. The expense for the materials of this structure is comparatively small, though the time taken in nailing on the strips was considerable. Still I have felt amply remunerated for the outlay, the house having stood two years, without needing repairs. A rustic seat in the interior will complete the work, where, Mr. Editor, when you visit me of a summer day, we will sit and talk over the past exploits of farming, and the future prospects of this healthful if not profitable occupation.

But as to summer-houses. I must say that in any garden, pretentious or unpretentious, they should not be made, as they too often are, of strips of board planed and painted and finished off with as much exactness and nicety as a dwelling-house. They have more the marks of art than is in keeping with the garden. Here the trees, the shrubs, the plants, have all the irregular aspect that nature gives them. But if you choose to cut and shape these into pyramids, and other artistic forms, then you may make your summer-house to correspond, and yourself wear a bob wig, three-cornered hat, and breeches with knee-buckles, when you walk or work among them.

Yours truly,

ALLEN W. DODGE.

Hamilton, Feb. 4, 1855.

REMARKS.—Capital suggestions, these. And when did his pen ever write, that he did not make such? We consider your "when you visit me," as a *bona fide* invitation, and shall appear to you at the earliest opportunity.

For the New England Farmer.

BARNs.

MR. BROWN:—I am glad to see that you propose adding still further to the interest and value of the *Farmer*, by publishing some plans for good barns. This Winter, a good many of your readers are making preparations to build in the Spring, no doubt, and any hints of a practical character may save them money.

Hoping before I am many years older to occupy a better barn than I now do, I have had my attention particularly directed to this subject, and have been into a good many fine barns. I need not go out of town, as you very well know, sir, to find them. And I undertake to say that the exception is not known in Concord, where a judicious outlay for a spacious, convenient barn, has not been followed by unmistakable evidence of *thrift* about the whole premises.

Those who build now, are pretty generally agreed upon one point; that it is more economical to build one building for the various farm purposes, rather than the great number which are seen so common about old establishments.

Let us look at a few figures, which *won't lie*. A building ten feet square contains one thousand cubic feet. Not to speak of the roof, the outside presents a surface to the weather of four hundred feet. We have, then, ten feet inside, to four feet outside.

Take another example. A building twenty feet square contains eight thousand cubic feet; the outside measures one thousand six hundred feet. Here we have five feet inside to one foot outside. We will now take a building forty feet square. The inside to the outside is as *ten to one*!

I am aware that the larger structure requires a heavier frame, that is all. The boards and shingles are the same in either case. I know, too, that the wide roof is worn by rain. That objection, however, is not of great weight.

I hold, Mr. Brown, that one part of a large barn accommodates another part. It is a saving of steps to have your horse near the vehicle to which you wish to attach him. Why go several rods to a ten-footer, and open another set of doors in the wind to "get out the chaise?" What comfort, in returning from market or town-meeting on a stormy day, and driving into a snug floor-way, there to untackle and put away horse and wagon, with ease and expedition. There is no difficulty in dispensing with the carriage house; the barn is the place for all the vehicles, the cellar takes in all the carts, and coarse wagons—a room at the side of the drive-way, the lighter vehicles.

Then what need is there for a separate building for tools; what place so central as an ample room by the side of the floorway? You start from the barn, usually, to go to different parts of the farm, and you return thither after the work is done.

I have thought, Mr. Brown, that portable bins for corn might be put up in this large tool-room. In the busy season of the year, corn-bins are apt to get pretty low, so they would not be in the way much when the tools were most used. I should prefer that the bins be where they could be seen to often. One might stand a better chance then of keeping the rats from destroying the corn. I have little faith in these out-of-the-way places to keep corn, it is sure to waste and injure.

In conclusion, may I ask those readers of the *Farmer* who have had experience, if apples can be kept through the winter in a part of the barn-cellar, without being tainted by the manure in the vicinity? What does Mr. Morrison, of Somerville, say?

W. D. B.

Concord, Mass., Jan., 1856.

REMARKS.—Excellent—we regret that it got out of sight and has been postponed so long.

For the New England Farmer.

SCYTHE AND MACHINE MOWING.

Father Buckminster is down upon the mowing machines. What ails the man? He seems to think scythe mowing as cheap as machine; and so far as the past is concerned, he *may* not be far from right; but it cannot be so with the future. The machines we must have. Any machine, which, in our hurried climate, substitutes brute for human labor, in the months of May, June and July, must be cherished. If a mowing machine will cut the grass as well and cheaply as the scythe, we should say of it as Patrick Henry did of the war,—"Let it come;" because it eases the severity of summer labor.

But more is to be expected. It will do the work cheaper and better, after a few more such years as the past has been, for improving the machines. It probably does it cheaper already. At least such is the opinion of many who have used it; and not a few who have tried it two or three years, declare that although a good mower will excel it in the goodness of the work, yet it already does its work better than the majority of such hands as can be hired.

J. A. N.

SEVENTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY H. E. ROCKWELL.

The seventh regular meeting of the Legislative Agricultural Society was held on Tuesday evening, in the Hall of the House of Representatives. The meeting was called to order at half-past 7 o'clock, and Gen. SALEM TOWNE, of Charlton, was called on to preside. He expressed some regret that the meeting was not more full, and that a notice of it had not been put in the daily papers. Before the close of the meeting, however, the attendance was as good as usual.

He then introduced as the lecturer of the evening, GEORGE E. WARING, of New York, stating at the same time the topic of the lecture to be, "*Agricultural Education.*"

The lecturer commenced by paying a high tribute to the people of Massachusetts as having done more, through their Legislature, for the promotion of agriculture than any other people on the continent.

He then spoke of the relative importance of agriculture, as not only surpassing any other occupation, but all other occupations. The necessity of educating those who are to be farmers, in such a manner as to fit them for their appropriate business, was insisted upon, and its necessity illustrated in a variety of ways. Agricultural Colleges are needed; but in order to be most highly beneficial they must be supported by those who attend them. But while we have no Agricultural Colleges, their place may be and should be supplied by giving an agricultural education to boys in the common schools. The introduction of agricultural studies into the schools of Great Britain has been tried with success. Chemistry should be made subservient to an agricultural education by making boys acquainted with the fundamental principles of agricultural chemistry. Philosophy also should be studied with reference to making boys acquainted with agricultural mechanics. Whoever is to be a farmer has a right to know all that relates to the first principles of his business. No one can be a good practical farmer without knowing the nature of the raw materials from which he is to produce his crops. He must know what he is to get from his soil in any particular crop, and consequently he must know what to apply to the soil, in order to enable him to obtain that crop.

The materials which constitute plants were then specified to a considerable extent, and then the manner of their growth was considered, and plainly pointed out.

The uses and abuses of soils were next referred to. In the consideration of soils it is necessary to regard especially their ash or inorganic matter. In all fertile soils there is a large quantity of phosphoric acid. The soil of the Miami valley contains

4 per cent. of phosphoric acid, while the best wheat land in Massachusetts contains only $2\frac{1}{2}$ per cent. The importance of atmospheric fertilizers was particularly commented upon. The air supplies to soils quantities of ammonia, carbonic acid, and oxygen. These not only enter plants through the leaves, but they enter into the composition of the soil to a great extent.

But few realize to how great an extent manure is lost in the country. In riding from New York to Boston, he had taken pains to notice the barns along the route, so far as he could do so, and he had seen but one barn upon the side of the railroad track which he was in a position to see, where the manure was not thrown out of the stable window and left exposed to the action of the atmosphere. The waste of manure, especially in cities, is enormous. Some very interesting statistical statements were made in this connection which were well fitted to impress the audience with the importance of greater attention to saving manures. Man is but a tenant of the soil, and he is guilty of a crime if he impoverishes the soil and leaves it poorer by his cultivation than he finds it, so that those who come after him suffer from his wastefulness. In conclusion, the lecturer said that farmers were yet, to a great extent, working in the dark, and were guided by superstition in many instances, rather than by reason.

At the close of the lecture, Rev. RALPH SANGER, of Dover, said that he was much pleased with the lecture, and he considered it,—to use an expression suited to his own profession—"pretty close preaching," and to carry out the same idea, they had got to make an "application" of it. He then referred to the comparative results of cultivating wheat in Ohio and in Massachusetts. The average crop of wheat in Ohio has been stated to be sixteen bushels to the acre. In Norfolk County he had known forty bushels to be raised to the acre. Of three entries for premiums on wheat, the lowest was about twenty-five bushels to the acre and the highest was thirty-two.

Mr. J. BROOKS, of Princeton, said that the average crop of corn in Illinois is thirty-six bushels to the acre, and in Massachusetts, it is thirty-one. There is, therefore, more made in Massachusetts than in Illinois, by the cultivation of an acre of corn. The price of a bushel of corn in Illinois was 40 cents, the last year, making the value of the crop from an acre \$14.40. It is said to cost \$5 an acre to cultivate it, which would leave a profit of \$9.40 per acre. Corn has sold in Massachusetts for \$1.25 per bushel this year, and the value of the average crop of an acre would therefore be \$38.75. Admitting the cost of cultivating an acre to be \$20, which is considered high enough, the profit is \$18.75 per acre, or \$9.35 more per acre than in Illinois.

Mr. BROOKS strongly urged the importance of saving manure, so as to produce larger crops. We are trustees of the land, and we have no right to starve our children who are to inherit it. The farmer is the first man in the world; everything depends upon him. It is important that he should understand the theory of soils and manures, and know their chemical elements. All knowledge may be brought into use in farming. He did not quite agree with the lecturer that in every case, corn should not be hilled. He had tried hilling and leaving corn to grow without it, and had found that which was hilled to stand best when exposed to the wind.

Mr. SIMON BROWN, of Concord, expressed his gratification with the lecture, and especially with that part which related to the education of the young farmer. He thought much of the education of the child who is intended to be a farmer to be wrong. Instead of selecting the brightest boy of a family to educate at College, he should be the one who is instructed in farming. Of all professions, there is none which requires such varied and deep learning as that of the farmer. But the method now pursued is to push aside the boy who is intended to be a farmer, so that he loses many opportunities which others enjoy. He has fewer holidays, and he does not enter into company so often as the child of the mechanic. The same is true of the daughters of farmers. There should be a change in the manner of educating young farmers.

Agricultural Colleges and schools are important, doubtless, but there are schools enough around us all the while, which are not used. Every gentleman present might set in motion a school in his own neighborhood by collecting together some dozen young men around his parlor fire, and encouraging and instructing them in agriculture, and by providing them with such periodicals as will instruct them. That has been done in one town, and it has altered the whole face of things in a few years. Every one can do much in that way.

The Chairman said he hoped they were not so much behind the age in his vicinity as had been suggested. He did not think the farmers' daughters worked any harder than girls did in former times.

Mr. DODGE, of Sutton, corrected a statement made by him at a former meeting, in which he had put the number of barns in the State at thirty-six thousand. He had been since informed by the Secretary of the Board of Agriculture, that there were seventy-six thousand. He took occasion also to re-affirm that in his opinion, the business of agriculture has depreciated within the last twenty years on this side of the Connecticut river. The importance of saving everything in the shape of manure of any kind, was also urged. He was decidedly of opinion that composting was unprofitable,

any further than was necessary to catch and save liquid or other manures that would otherwise be lost. To use his own language, "this composting, or using phosphates, is all gammon. We don't know anything about it in our section; nor are we ignorant."

A farmer in his vicinity, who has read the discussion here, on the subject of the application of manures, expressed his surprise that there was so much said in favor of composting. He said that he applied his manure in a fresh state, and then after spreading upon the surface, plowed furrows, just far enough apart to cover it—cut and cover, he called it—and leaving the space between the raised furrows for the water to subside into. The manure thus covered was composted in the soil, and none of it was lost.

The farmers of Massachusetts are as intelligent as any class of people, and they bring up their sons and daughters in a manner as reputable to them as any other profession.

With regard to the cultivation of corn, he said he had no doubt it could be raised here with more profit to us than it could be to any farmers at the West, if they have to come here for a market.

Mr. C. L. FLINT then rose, and expressed his pleasure with the lecture of Mr. Waring, and offered the following resolution, which was unanimously adopted.

Resolved, That the thanks of this Legislative Agricultural Society, be and are hereby paid to GEORGE E. WARING, for his able and very interesting lecture on Agricultural Education at the State House, Feb. 26th, 1856.

The subject for discussion at the next meeting was announced to be, "*Grasses and Small Grains.*"

For the New England Farmer.

NEW IDEAS IN AGRICULTURE.

Pumpkin seeds should not be fed to milch cows, unless you wish them to decrease in milk. A gentleman in this vicinity has tried it, believes it, and would have made it known earlier, but for fear of ridicule.

Girdling an apple tree the last of June, or when its fruit is of the size of a common walnut, will not kill the tree, but improve the fruit.

A close chamber is a better place to keep apples than a cellar. Apples bear freezing once without injury, if they are not handled till thawed. Linen cloth laid on or around apples prevents injury from freezing. Apples have been found in good order in the spring, that have lain in barrels under the trees all winter. Roxbury Russets are considered the longest keepers.

Gathering fruit from the apple and currant trees, when green, or before they are fully ripe, makes them more prolific the following year.

Trees designed for clayey soils do best when transplanted in the spring.

Currants bear in three years from cuttings. Apples bear in ten or fifteen years from seed, usually in about twelve years.

J. N. BAGG.

For the New England Farmer.

NOTES FROM THE SOUTH.

Weldon, N. C., Jan. 10, 1856.

DEAR SIR:—Agreeably to my promise to you, to give my ideas of Southern agriculture, I am now writing you from this town, or rather collection of houses in North Carolina.

Weldon is the junction of three lines of railroad, Northern, Southern and Western, and were it in Yankee land, would long ago have rivalled many of our Northern cities, but it is a mere "indus" at present.

The changes from the Northern practice of agriculture may be seen the moment one leaves Philadelphia; the grass crops become of less importance, the grain of more; and instead of carts and wagons that may be drawn, well loaded, by two horses or mules, the wagons and carts need, at least, two mules to draw them without minding the load. I repeatedly saw at Washington, four and even six mules drawing loads that I should send into Boston, from my farm at Lexington, with at the best, two horses, and in most cases, only one. A very remarkable feature, too, is, that no one drives his load as we do, sitting in the wagon or on top of the load, but whether he have two or four horses, rides one in the saddle, and drives the others, either by reins or the voice.

The agricultural implements, too, strike a Northerner with amazement. Hoes as large as four of ours; plows that a man can hardly lift, and often not running more than three inches in the soil.

Seeing all these things, and having been told ever since I can remember that the Southern people do everything by halves only, I was not surprised at the state of things that I found prevalent in this State. I have been staying here several weeks, and have therefore had a pretty good chance to see things as they are. Now, remembering what I have said about the poor tools, the negligent habits of the people, the carelessness of the negroes, &c., as well as the highly cultivated fields, trim grass lands, nice barns and large yields of our best New England farms, shall you not be surprised to hear me say, that even here, in North Carolina, a State rarely heard of, and generally considered entirely behind the times, I have seen better farming, better tools, better discipline and better crops, than I have ever seen before in my life.

It may seem to you something like exaggeration, but it is nevertheless true, that any of our Northern farmers might visit the estates of Messrs. Henry and Thomas P. Burgwyn, on the Roanoke River, near Halifax, to their very great advantage.

These gentlemen farm, or more properly plant, some three thousand acres of land, and show a perseverance against obstacles, and a grasp of mind, agriculturally, that would do them credit in any portion of the world. Their lands consist of a rich alluvial river bottom, some high and some low, that with reasonable culture, will yield twenty-five bushels of wheat or less of corn to the acre; land much of which they bought for less than five dollars per acre because it was worn out.

The texture of the land is loamy clay, and when they took their plantations they had been so long cultivated in the old way, plowing three inches deep, that all the surface below that depth had become hard as a rock. As I more particularly studied Mr. H. R. Burgwyn's plantation, having said

there a week, I will confine myself to what he has effected. Mr. B. inherited his plantation about seventeen years ago, together with some hundred negroes, he, at that time, living at the North, although of Southern birth, and at that time of decided anti-slavery tendency. His first business after taking possession of his property was to investigate how he could best dispose of his slaves for their own advantage; and in his researches occupied several years. In the meantime he also applied his thoughts to bettering his lands; whilst engaged in this liberation scheme, together with his brother, he imported a hundred Irishmen, so as to try white labor, which proved an entire failure, costing them about \$2000. A mind thus active had not failed of course to study the plantation economy, and seeing us plant deep and liberably mature at the North, he tried the same thing on his lands, and putting in his plows ten inches instead of three, found the benefit; he also suffered very much from standing water which made his clay subsoil so tenacious as to be almost unworkable; to remedy that he dug ditches, and besides innumerable covered and blind ditches, has one single straight ditch, two miles long. Probably all of his ditches would out-measure eight miles. When he first commenced there was not a single field in one crop on the Roanoke that would exceed a hundred acres; he had last year, nine hundred acres in wheat; four hundred and fifty in corn, and five hundred in clover; and he has for this year, nine hundred in clover and nine hundred in wheat, the corn not yet planted. To manure the wheat of last year he not only applied several thousand dollar's worth of lime and artificial manures, but also turned in clover enough at present prices to come to six or eight thousand dollars more. Of the nine acres of clover this year, he will cut a portion, feed a portion, and turn in the remainder. The first wonder is, how he cuts his wheat; he had last year six four-horse reapers in the field at once; his wheat is cut, then bound and stooked, *and then thrashed in the field.*

The thrashing goes almost simultaneously with the cutting. To thrash this wheat he has a steam thrashing machine, of twenty horse power, that will thrash one thousand bushels in a day; and I saw it shelling corn at the rate of two thousand bushels a day. His working force is one hundred and seventy-five negroes, fifty-five mules and horses, and one hundred and fifty head of cattle, about one-third of which are oxen. His plantation at this season of the year, is, of course, much less inviting than at the growing season, the more particularly that it snowed the day after we got there, and has not thawed yet. So severe cold has not been known these thirty years here; the Roanoke being covered with ice, and the thermometer at eight degrees above zero. In spite of the wintry appearance however, it is easy to see his improvements, particularly for one, whose business is, like mine, to judge of nature's beauties and capabilities. His house stands in a grove of oak trees, and has directly in front of it a field of wheat, of six acres, not one great square field, but beautifully broken and diversified with groups of trees: and when fully grown, under the influence of the wind, it must even rival the beauty of a water landscape, as it rolls, swells and waves, according to the power of the blast.

Such a plantation is a village in itself; it has its carpenter's and blacksmith's shops, its wheelwright

and harness-maker; and this one its steam engine. From the nine hundred bushels of wheat, Mr. B. measured off twenty-three hundred bushels of wheat, which sold in Petersburg, Va., for \$2.25 per bushel.

But a word for the character of the country.—Probably no State in the Union can surpass it in its capacities. Not only are there these immense and fertile fields, but almost all the temperate and many tropical fruits flourish there; the apple, pear, plum, cherry, peach, persimmon, grape, currant, gooseberry, strawberry, blackberry, and huckleberry grow wild, together with which may be cultivated the fig and pomegranate, amongst the fruits. In the field crops, we have all the cereals, Indian corn, tobacco, cotton, hemp, flax, indigo, madder, the grasses and several of the root and green crops, and lastly but not least, the sweet potato, that may truly be called the staple of the South. In the mountains are almost every kind of valuable mineral, and its immense sand plains are covered with the long-leaved pine that gives turpentine, rosin, tar, pitch and yellow pine lumber.

Every one has heard of the immense herds of hogs that live in the woods here, returning to the owner only when hunted for, or starved out in the winter: a singular feature of the pine tree, is, that its mast and young roots are a favorite food with hogs upon which they fatten rapidly, so that the long-leaved pine may be considered the protecting genius of the State, giving as it does shelter, when worked into lumber the materials for ship building, fire in its waste portions, light by its far-famed light wood knots, and food for the pigs, which in their turn supply the only one thing the pine tree does not, animal food for man.

The great desideratum here is intelligent white labor; any intelligent and willing Northerner, either, as farmer or mechanic or tradesman, is sure to succeed if he will but come here and apply the same powers of mind here that he would at home.

Land can be purchased for three dollars an acre, which by simply deep plowing, and the application of a small amount of lime, will yield fifteen to twenty bushels of wheat the first year.

Mr. Burgwyn told me of numerous instances of this sort; instancing one of his own plantations thus purchased for three dollars per acre, from which he sold \$30 per acre the first year.

The only danger to be apprehended is, that such men coming here would become slave owners; for the institution as seen here presents no obnoxious features, and *provides so well for the animal happiness of the slave*, that it necessitates one to continually summon up his principle to resist falling in with and heartily approving the whole system; but to one who cares nothing about slavery and who is minded to put energy into his action, here lies a certain fortune.

Excuse the length of this letter; in future I will be more concise. I remain yours truly,

R. MORRIS COPELAND.

BRIEF HISTORY OF GUANO.—The London *Farmer's Magazine* furnishes the following brief history of guano:—"Guano, as most people understand, is imported from the islands of the Pacific—mostly of the Chincha group, off the coast of Peru, and under the dominion of that government. Its sale is made a monopoly, and the avails, to a great

extent, go to pay the British holders of Peruvian government bonds, giving them, to all intents and purposes, a lien upon the profits of a treasure intrinsically more valuable than the gold mines of California. There are deposits of this unsurpassed fertilizer in some places to the depth of sixty or seventy feet, and over large extents of surface.

The guano fields are generally conceded to be the excrement of aquatic fowls, which live and nestle in great numbers around the islands. They seem designed by nature to rescue, at least in part, that untold amount of fertilizing material which every river and brook is rolling into the sea. The wash of alluvial soils, the floating refuse of the field and forest, and, above all, the wasted materials of great cities, are constantly being carried by the tidal currents out to sea. These, to a certain extent at least, go to nourish directly or indirectly, submarine vegetable or animal life, which in turn, goes to feed the birds, which in our day are brought away by the shipload from the Chincha Islands.

The bird is a beautifully arranged chemical laboratory, fitted up to perform a single operation, viz.: to take the fish as food, burn out the carbon by means of its respiratory functions, and deposit the remainder in the shape of an incomparable fertilizer. But how many ages have these depositions of seventy feet in thickness been accumulating?"

SAVE COAL ASHES.

ARTHUR YOUNG, in his valuable Report of the Agricultural Surveys of several European countries, speaks of cases where coal ashes were used with great and astonishing success, though the statements made to him, he says, were quite discrepant and contradictory. In one of his articles upon the subject, he remarks:

"Coal ashes are used from fifty to sixty bushels to the statute acre, for a common dressing; they succeed well sown on clover in March or April, on dry lands, and do much good applied to sward lands, during any part of the winter or spring. They are never used on wheat. In very dry seasons, coal ashes do very little good; they, as well as most other of those dressings, requiring rain after being sown to set them to work."

Coal ashes, like the ashes of wood, possess many valuable qualities, and are generally found to possess great efficacy on soils which are characterized by a deficiency of alkali. Why the ashes of coal should not be regarded as valuable on wheat lands, is a problem we are wholly unable to solve. No crop is more decidedly improved by alkaliescent manures, as a general thing, and as coal, as well as wood ashes, possess certain alkaline properties, as well as other energetic principles, their application to the crop must necessarily, we think, be productive of advantageous results.

In the 4th volume of the *Farmer*, for 1852, page 474, may be found an excellent article by Mr. STORER, of West Hartford, Conn. His experiments in the use of coal ashes, had surprising results. There is also an article on the subject in the volume for 1853, with an analytical table by Prof.

NORTON. This subject is introduced, because inquiries have been recently made with regard to the value of coal ashes as a fertilizing agent.

For the New England Farmer.

WINTERING BEES.

MY DEAR SIR:—Your paper of Feb. 16 contained a timely caution, "Take care of your Bees," which in the present inclement season, merits more notice than heedless and inexperienced bee-keepers give. The greatest peril of the season with regard to them is yet to come, when the warm days of spring invite them abroad, and the heavy body of snow now upon the ground, by imparting a chilliness to the atmosphere, to which they are unaccustomed, disengages them, and will, if proper caution is not exercised in their behalf, ruin whole colonies in a short time.

Aside from this unnatural atmosphere, there is another cause of a fatal effect attending their going abroad while the snows are dissolving, especially if a warm sunshine invites them from their winter quarters. They become snow-blind, lose their way and fall upon snow never to rise. Hence it is desirable to keep them in as dormant a state as possible until the snows have fairly dissolved. To effect this, a cool locality, with little if any light, is decidedly the best. The cool may be found in open buildings, where the sun's rays will not fall upon the hive, and if the building is too light, a rug or piece of matting may be thrown over the hive, so as to shut out all the light from the apertures, and yet leave a free circulation of air, if that is necessary, though we doubt the utility of giving too free an access of the latter.

Our views on this matter are established from the experience we once had of burying some light hives in the earth on the approach of cold weather, and allowing them to be buried until frost came out the following spring. Here they lay, froze in, and much of the time covered with snow, yet when they were taken out, they were as fresh and lively as though no winter had disturbed their dreams; the loss in number was very small, the quantity of food consumed was trifling, indeed; the air that reached them must have been very small in quantity, yet we never saw bees healthier in spring, or work better in summer, than these.

We left a few hives standing unprotected the present winter. The consequence was, in one of our earliest severe storms, they were all buried in a heavy drift, which we removed in front in order that the necessary evaporation of moisture arising from the breath of the bees might be going on, and prevent the formation of ice in the hives. But our labor in this matter was soon counteracted, for another storm came and buried them still deeper, while the rapid succession of storms and blows to which we have been subject deferred our labor in the clearing away process, so that they remained buried in snow some four weeks. Last week, however, the wind stopped blowing long enough for us to take breath, and among our earliest labors we exhumed the hives from the cold tomb that the winds had raised around them. We found they had, by their breath probably, melted the snow from the immediate front of their hives, and were as lively as a cool morning would permit them to be. They were removed to a cool, dark room, where

they are now apparently enjoying their morning nap preparatory to spring labors, with a commendable and healthful quiet.

From the facts in the case, so far as they have been presented, I have concluded that the dryer and more dormant bees can be kept until spring has fairly set in, the less will be the loss in wintering, both in numbers and food, and, as a matter of course, the more prosperous they will be the following summer. Yours truly,

Elmwood, Feb. 26.

WILLIAM BACON.

REMARKS.—The above facts and suggestions are valuable. There is more capital invested in bees in New England than many believe. It is an error to suppose they need the sun in the winter—they want an equable temperature, and that may be a pretty low one, down to the freezing point, or even lower, all winter, if it be regularly so. Hives protected on the north, and open on the south where the sun will strike them freely, will become so warm, even in February, as to set the bees all in motion; they will then pass out of the hive to relieve the promptings of nature, become chilled or blinded, or both, fall upon the snow and die. They may be safely kept in a cold chamber or attic, in a cool, dry cellar, and we have heard it stated, buried in the centre of a hay-mow, the aperture being closed with stout wire gauge. The article of our correspondent is timely and excellent, for which we beg to express our thanks.

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[This Society will embrace towns on both sides the river in New Hampshire and Vermont.]

A. B. CLOSSON, Hanover, N. H., President.
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A VILLAGE OR FARM COTTAGE.

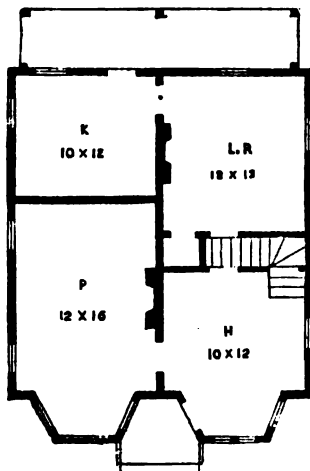
This is one of the beautiful designs which we have promised, from the work entitled "*Village and Farm Cottages*," by the Messrs. CLEVELAND & BACKUS BROTHERS, of New York. Come, and look at it, and see how inviting it is in every particular. Criticise its proportions, observe its approaches and surroundings. See how rural it is, and yet how modestly dignified and attractive. No wonder a woman approaches it, "last, best gift." Beyond the close fence is the garden; now be seated on the piazza, under the luxuriant grape vines, and see how completely that agrees with the mansion itself. It is not an ornamental garden, it certainly is not purely a kitchen garden. It has no pretensions, but like the house, it supplies the wants of the family with everything it can in its way.—

How convenient to drive to the door, or turn and drive away to the stable. No sharp angles in the way, no frightful sinuosities to torture your carriage wheels, and give them a cramp for life. Everything is easy, and natural, and unsophisticated about it.

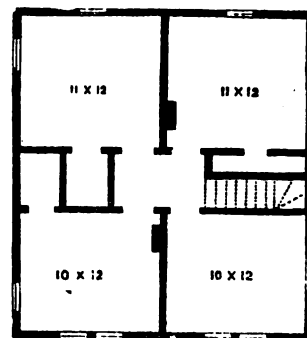
Will all this have an influence on its occupants? Who can tell? Has architecture, and art, whether on the House or on the Soil, any moral bearing on the heart? on the character? on the happiness of the family? Who can tell? Will the shade of *Inigo Jones* reply?

"In exterior and future, this design has considerable claim to originality. There are two large bays on the front, one in the parlor and the other in the hall. The main entrance is at the side of the latter. This is from a porch, partly enclosed by these projections, and covered by an overhanging roof.

There are four good chambers on



THE FIRST FLOOR PLAN.



THE SECOND FLOOR PLAN.

Of these three have clothes presses attached. The front windows of this story are double,—two in one. This makes the rooms more valuable, while it gives dignity to the exterior. Many house fronts are spoiled by having too many windows. The wall-veil has no breadth or dignity, and the house becomes a large lantern.

The roof is low and has a bold cornice. The back verandah is plain, with solid posts and visible frame-work. There should be a rear building, the roofs joining. In winter, the middle part of the verandah may be enclosed, making an entry to the kitchen and wood-room.

Its general form makes it suitable for a spot where it may be seen from several points. The lot on which it is to stand, should be open and smooth, rather above than below the grounds about it. Height of each story 9 feet. Cost, \$1,200."

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 5.

CONSTITUTION OF FARMING AND MARKETS.

In my last, I submitted a few questions respecting the system of agriculture, which would, in time, be adopted in New England, and how far we should copy the English system. I venture to say we shall never adopt the system of large farms, which is by many considered the distinguishing feature of the English system. Our institutions are opposed to the system of large farming, and sound policy is opposed to it and to its tendency. Whatever the system we adopt, the farmer here will own his farm, and where the laborer owns the soil he tills, the spade digs deeper, the scythe takes a wider sweep, and the muscles lift a heavier burden. A few rural populations, owning their own farms, is indispensable to the lasting prosperity of a country and to its military strength. England feels now, as Rome felt before her, the evils of the policy she has carried so far, though not as far as is thought, the conversion of small holdings into large farms—in her inability to fill up her armies. She has driven by the conversion of small farms into large ones, many of her rural population to her cities and other lands, whom she now would fain have in the Crimea; though perhaps this population is better off, scattered where it is, in other lands and even in cities, than it would be in the Crimea. But the martial pride of England can no longer glory as it once could, in its rural military strength. A just retribution—fruit of an unjust policy.

Large farming is indeed carried very far in England, but as we before remarked, not as far as is thought. There are the immense possessions of the nobility; but there are also the modest domains of the gentry. There are dukes, who own whole counties, but there are 250,000 proprietors of the soil of the United Kingdom; and two-thirds of the soil is in the possession of what may be called second rate proprietors; and farms of 200 acres are very common. An erroneous impression prevails, that landed property in England does not change hands. Here a particular fact has been unduly generalised. Certain lands are under entails, but most are free.

Just as the concentration of property in England is very much over-rated, so the influence which large property exercises, in the superiority of its agriculture, is also exaggerated. Large farms usually, though not always, imply capital, that is, means to command labor, manures, tools, farm-buildings, stock, &c., in possession; but where the owner of a small farm has a proportionate command of these means a small farm will be better cultivated than a large one, and produce more in proportion to its size. Large farms, in England, have generally belonged to men or been cultivated by men of large means; hence their success. In New England, small farms are cultivated by men of small means, and markets near at hand have stimulated this cultivation, hence the state of farming in New England. The Island of Jersey, with its dependencies is a country of small proprietors; there is scarcely to be found, in the whole island, a property of forty acres, many vary from five to fifteen; but yet it is cultivated like a garden. The great bane of agriculture, of manufactures, of commerce, of every business is, in fact, debt, and want of means, not debt contracted, to make improvements, but to hold the property used, and stock it, and carry it on. In fact, there is no distinction between agriculture and manufactures, though it is so often made; both are processes to produce results useful to man—both are processes to produce results by the aid and co-operations of the powers of nature and by the blessing of God—a beet, a carrot, a potato, an ox, a sheep, grass, are each as much a manufactured article, produced by man, by the use of means and labor and capital, as a piece of cloth, or a plow, or a machine, or any implement. God aids, by the powers of nature and the qualities he has imparted to created things, as much, in the one case as the other; and man co-operates with his Maker, in the one case, as well as the other in producing the results, by his thought, his labor, and his capital. A small manufactory of any article, with proper capital and skill, will produce as cheaply and often cheaper than a large one. A small farm, with proper capital and skill, will produce as cheaply and often cheaper than a large one. The products of the farm and of manufacturing require markets and will not be produced unless there are markets for them. When money is worth three per cent. per annum, as in England, there will be better and cheaper farming than with us here, where it is worth seven, and there will be better and cheaper farming, especially on a large scale, where labor is cheap as in England, than with us where it is dear; there will be better farming, marts population is dense and congregated in the where of commerce, and manufactures largely, than with us, where it is sparse and scattered. The same is true under the circumstances stated of manufacturing; in fact, farming partakes of the nature of manufacturing, or is manufacturing and subject to all the laws to which farming is subject. The best constitution of property for agriculture is that which attracts to the soil most capital, either owing to the owners being richer relative to the extent of land they possess, or because they are induced to lay out a larger proportion of their income. I believe that with us, small proprietors are most liberal to their lands. Nothing can exceed the implicit confidence with which the English farmer makes advances to his land, a matter in which our farmers do not rival him, though they may do so hereafter,

as markets and means tempt them to it. The English ascribe their substitution of horses for oxen, their large out-lays for manures and fertilizers, for levelling, subsoil-plowing, draining, and to large farming, but these things are signs of rich and intelligent, rather than of large, farming. Small and middling farmers understand the benefit of these things quite as well as great; they are unknown only where farmers are poor and ignorant. What characterizes English farming is not so much large farming, so called, as the raising of farming into a business of itself, and the amount of capital at the disposal of farmers. We have settled how much capital is needed to carry on most manufacturing operations, but not how much is needed to carry on the operations of a farm, which is, as we have shown, no more nor less than a manufacturing operation; but the English farmer before 1848, held, that to conduct a farm, he must have a capital of \$40 to the acre, and now he thinks \$30 to the acre not too much.

But *markets, markets*, are the greatest and most pressing requirement of agriculture. How to produce is a question which thousands of minds settle after the demand for production comes. In markets, the English farmer has the advantage of farmers of all other countries. From the development of manufactures and commerce in England, the farmer there is surrounded by industrial and commercial populations, which exist nowhere else in the world. One-third of the English nation is congregated at two points, London in the south and the manufacturing towns of Lancashire and West Riding; these human-ant hills are as rich, as they are numerous. If the Yankee farmers were thus surrounded by markets, think you they would not settle, as the English have done, the questions, what produce brings the highest price relatively to its cost of production, and by what means the cost of production is to be reduced in order to increase the net profit? The English farmer, for example, gives a preference to the production of meat, but this is not only because the animals by their manure maintain the fertility of the land, but because meat is an article much in demand and the population are rich enough to buy it. So of milk, and so of wheat.

I think an observer can see that the markets of New England begin to speak in a voice, which the farmer must hear in many a farm-house, whose occupant has thus far raised but little more than was needed for his own consumption, and that the increase, in the populations of the towns and cities of New England, portends an agricultural revolution.

The agricultural population of England has developed a law of increase, which I trust, will not be developed by ours; and yet there are indications that we tend in the same direction. The more populous England has become, the less proportion has the agricultural population borne to the whole population. At the end of the last century the agricultural population was sixty per cent. of the entire population of England; it is now but twenty-five per cent. of the entire population. In 1800, it was reckoned that there were about nine hundred thousand agricultural families in Great Britain; now there may probably be a million. But now the non-agricultural families amount to five million, while in 1800 they did not probably amount to a million.

If this be the law of increase of agricultural pop-

ulation, as a country advances in population, then, as a country advances, the processes of agriculture must improve, the products of agriculture, on a given surface be greatly increased, and the price of agricultural products must advance.

There is a feeling of discouragement in New England respecting agriculture; but it will pass away; she has taken the two great steps towards agricultural prosperity; she has developed commerce and manufactures and thus multiplied consumers, and improved the means of communication which bring consumers and producers together. Will the fertility of the West keep New England agriculture at a stand?

M.

For the New England Farmer.

SEED POTATOES.

MR. EDITOR:—As much has been written in your paper about seed potatoes, permit me to give the views that I have obtained from my experience and observation in growing them.

As respects small potatoes for seed, I have sometimes planted them, and have had a good crop; but experience has taught me that, by continuing to plant the smallest size a few years successively, you will have small potatoes. And this we might reasonably infer from the nature of things.

I think we should select for seed those that are most perfectly grown and matured. I would not select all the largest size to plant, for they are oftentimes defective. Neither would I select those that are covered with prongs, or in any way defective.

Potatoes intended for seed, I think should be grown upon a soil which has not been made so excessively rich by manuring, as to force their growth to an enormous size; such are not likely to be matured in a very healthy state, and consequently are unfit for seed. This rule will apply to many other things. Animals raised upon very high keeping, may be forced to an unusual growth; but this will exhaust the powers of their natures, and they will become unhealthy, and be short lived. Such would be poor breeders. One thing more, in respect to seed potatoes. They should be grown in a soil in which potatoes are least affected with the rot.

Ipswich, February, 1856.

REMARKS.—One thing seems generally to be forgotten in speaking of "seed" potatoes—and that is that we *do not* use the *seed* for planting, but the tuber. We have experimented for years by using large and small potatoes, and have never been able to discover any difference in the product. Indeed, we heard Mr. BUCKMINSTER, of the *Ploughman*, state a few evenings since, at a Farmers' Club, that it was highly probable that an *unripe* potato is actually better for planting than one that has come to perfection; and we are more than half inclined to agree with him. In times of scarcity, some persons cut out the eyes, and use them *only*, and still without any diminution of crop. This is usually the case with sweet potatoes,—nobody thinks of planting the whole potato to remain as the source of a hill. Too much care cannot be observed, in using the most perfect seed—when seed is used.

For the New England Farmer.

HOW TO GET GRASS CROPS.

Old Fields—Ashes—Lime—Salt and Brine—Keeping Stock up—Switching them for Exercise—Ventilation—Remarks.

MR. EDITOR:—I am in trade. Have 145 acres of land, three miles from place of business; thirty acres in grass. Soil, coarse gravel; bears one-half to three-fourths ton good hay per acre. Now as hay is the most profitable crop grown in this lumbering region, I wish to keep the soil, if possible, in condition to bear one ton per acre, by top-dressing, and sell my hay. Ashes can be delivered on the farm for twenty cents per bushel, (unleached.) Rockland lime, \$1 62½ per bbl. Plaster, \$10 per ton. Will all or any of them be profitable to buy for top-dressing? Hay is worth, (average price,) \$10 per ton on said land. If so, when and how should they be applied? (a.)

I have the salt and brine that remains in retailing fifty bbls. of pork and fish annually—would it be right to scatter the salt and brine on to the mowing field, or mix with muck, lime or ashes, or even charcoal? In answering these questions, I deem it of the greatest importance to be sure, beyond a reasonable doubt, that it will pay, for investment in manure is often like "railroad stock," the balance sheet may show money out of pocket. (b.)

A neighbor of mine asks your opinion of the policy of keeping stock tied up all the time, in the barn. In his case, it is less labor to drop the manure into the cellar, and water the stock at the stanchions, than to turn them out of the barn. But the main question is, is it as well for the health of the stock? One argument advanced by him in favor of his new plan is, that the stock are more comfortable or warmer, and hence, will do better. Another is, that they are in no danger of injuring each other, as is often the case, the stronger beating the weaker; and cows, especially, being more quiet, will give more milk.

In answer to my objection that they will suffer for want of exercise, he proposes to make them stand about to the right and left pretty lively, with a switch, once each day. His barn is forty by fifty feet, three stories high, including the basement, and clapboarded. I urge to ventilate by raising the windows in either gable end—from the fact that the moisture from fifteen head is so great, the roof, and even the walls of the barn, are completely covered with frost an inch thick in places, and constantly accumulating. As our neighbor is a reader of your valuable paper, I hope, should you agree with me in my suggestions for more ventilation to his barn, it might induce him to reduce it to practice. (c.)

C. S. WELD.

Olanon, Penobscot Co., Me., 1856.

REMARKS.—(a.) If your grass land has been mowed for several years, the roots are probably scattering and feeble, so that if you manure ever so highly, a good crop could not be reasonably expected until the new grass, stimulated by the dressing, had formed new and vigorous roots. To do the work properly, therefore, the land should be plowed and re-seeded; then with a plentiful application of ashes, together with a little barn manure, if possible, for the first year, you would probably get an average crop of a ton and half of the best hay for sev-

eral years. But an annual application of ten to fifteen bushels of ashes per acre would be required.

(b.) Mix your salt and brine and lime with peat muck, for a top-dressing.

(c.) Your doctrine is undoubtedly correct with regard to the stock. On a sunny day, turn out three or four of the cattle to stay an hour or two, and on the next as many more, until all the stock have their turn. The card, drawn in vertical lines down the sides of the cattle with a careful hand, would be an excellent substitute for "the switch." The evaporation from the manure, with the breath and perspiration of the cattle, will soon destroy the strength of the timber and boarding of the barn, making it weak and rotten as "punk." But, notwithstanding, your "neighbor" is more than half right. A long experience has satisfied us that cattle do better tied up most of the time.

WONDERS OF THE CREATED UNIVERSE.

What mere assertion will make any one believe that in one second of time, in one beat of the pendulum of a clock, a ray of light travels over one hundred and ninety-two thousand miles, and would, therefore, perform the tour of the world in about the same time that it requires to wink our eyelids, and in much less than a swift runner occupies in taking a single stride? What mortal can be made to believe, without demonstration, that the sun is almost a million times larger than the earth; and that, although so remote from us, that a cannon ball shot directly towards, and maintaining its full speed, would be twenty years in reaching it, it yet affects the earth by its attraction in an inappreciable instant of time? Who would not ask for demonstration, when told that a gnat's wing, in its ordinary flight, beats many hundred times a second; or that there exist animated and regularly organized beings, many thousands of whose bodies, laid close together, would not extend an inch? But what are these to the astonishing truths which modern optical inquirers have disclosed, which teach us that every point of a medium through which a ray of light passes is affected with a succession of periodical movements, regularly recurring at equal intervals, no less than five hundred millions of millions of times in a single second! That it is by such movements communicated with the nerves of our eyes that we see; nay, more; that it is the difference in the frequency of their recurrence which affects us with the sense of the diversity of color. That for instance, in acquiring the sensation of redness, our eyes are affected four hundred and eighty-two millions of times; of yellowness, five hundred and forty-two millions of millions of times; of violet, seven hundred and seven millions of times per second. Do not such things sound more like the ravings of madmen than the sober conclusions of people in their waking senses? They are, nevertheless, conclusions to which any one may most certainly arrive, who will only be at the trouble of examining the chain of reasoning by which they have been obtained.—*Herschel*.

NUMBER OF TREES ON AN ACRE.

Table showing the number of Trees required to plant an acre of ground, from one to fifty feet apart.

FEET.	TREES.	FEET.	TREES.
1.....	43,560	36.....	64
2.....	10,890	37.....	59
3.....	4,840	38.....	56
4.....	2,722	39.....	51
5.....	1,742	40.....	48
6.....	1,210	41.....	45
7.....	889	42.....	43
8.....	680	43.....	40
9.....	535	44.....	37
10.....	435	45.....	35
11.....	360	46.....	32
12.....	302	47.....	31
13.....	257	48.....	30
14.....	222	49.....	28
15.....	193	50.....	27
16.....	170		26
17.....	150		24
18.....	134		23
19.....	120		22
20.....	108		21
21.....	98		20
22.....	90		19
23.....	82		18
24.....	75		18
25.....	69		17

For the New England Farmer.

SUNFLOWERS.

MR. EDITOR:—My residence is in the woods, and my experience as a farmer is small, having spent the most of my life in professional matters. But even the desert presents its oasis, or green spot, and watering-place, so those of small experience may have something to say.

Last fall, I planted a few sunflower seeds around the stumps and about the corners of the fences. Three of the largest sized heads, representatives of the mass, I counted, one numbering a thousand seeds, the second, one thousand two hundred and fifty—the third, one thousand five hundred. The same stalks yielded in addition to the above, from one to four more heads.

Now, if one seed will raise a thousand, the smallest number counted in one head, the seed being one foot apart in the row, and two feet apart wide, on an acre, we have, as I have counted and measured, two hundred and twelve bushels.

Why might not the seed be sown and harrowed in the same as oats, care being taken to have the seed far enough apart. I harvested the heads with a knife, and put them under cover, and fed them out to my poultry, who do all the threshing, and pronounced a bushel of sunflower seed equal to a bushel of oats.

As this is my first attempt at the business, I should like to be informed as to the best mode of seeding and harvesting. The stalks would make good kindling, or baker's wood, for both city and country. (a.)

RUTA-BAGAS.

Among the stumps, very rough and soddy, I raised some roots weighing eight pounds. The crop was not over half the quantity, as rated by good farmers, and yet I find it very profitable. I keep only one cow, whose feed is half a bushel of roots per day, with corn stalks and straw, at a profit of one dollar per week. This cow, but for the roots, would probably have dried up in the fall and have been a dead expense until spring. As it now is, I anticipate near a pail of milk per day, while the frost and snow of 1856 remains.

Please tell us the best seed—the time for sowing—the quality of soil—the mode of cultivation. (b.)

ONIONS.

Will the Farmer tell us how to raise this useful article? Thus far, I have not made the business profitable. Please give us some names to whom an address would be satisfactory. Near Detroit, we could find an ample market. (c.)

PARENIPS AND CARROTS.

One of my neighbors raised five hundred bushels to the acre. He turned over a piece of sod, mellowed it with harrowing, did the necessary work, and received the above rich reward. The carrots he fed to hogs, cows and horses, in the place of corn and oats. A little information as to the *modus operandi* would be thankfully received.

CORN AND OATS.

These grains do well among the roots, just so far as the seed has a chance to the mellowed earth below the muck. I fully agree with an old farmer, who writes in one of your numbers, "*plant corn*, and again I say, *plant corn*." This is a grain never out of place, save when out of the crib, or out of the stomach of man or beast.

EBENEZER M'DONALD.

Utica, Michigan, January, 1856.

REMARKS.—(a.) Perhaps some of our readers have cultivated the sunflower as a crop, and understand the true mode; if so, they will confer a favor upon us and our correspondent by replying. The sunflower contains a very nice oil—would it not be well to cultivate it on that account? It is said to burn well in lamps, and as the plant is hardy, and of vigorous growth, it seems that a sufficient product might be attained, to make it an object of cultivation. Perhaps a difficulty would be met in finding some expeditious method of expressing the oil: but means would soon be devised to accomplish that, if the crop were found profitable.

(b.) There is among us a great variety of turnips, but the common ruta-baga, or Swedish turnip, taking its quality and productiveness into consideration, is perhaps as good as any. It is hardier and more nutritious than any of the common sorts, and in addition to its being more esteemed for the table, and as food for stock throughout the turnip season, is better adapted for spring feeding generally. It, however, requires a somewhat deeper and superior class of soil and more generous manuring than the common flat turnips.

For the ruta-baga, the ground should be plowed deep and finely pulverized, and the manure thoroughly incorporated with it. Harrow level, and sow with seed sower, the rows two and a half or three feet apart, and the plants at least one foot apart in the row, and then the whole ground will be covered, if the crop is a good one. Leaving them too thick in the row must be carefully guarded against, as their leaves are broad and extend freely on every side, so that even as widely apart as we have stated above, they will entirely cover the ground, long before the crop has come to maturity. There is another advantage in cultivating

the ruta-baga, as it may be *transplanted* successfully where the seeds have failed to come.

(c.) Preparation of land for onions should be much like that for ruta-bagas. The seeds of both are small, and require a very fine tilth in order to ensure germination. CHARLES B. CLARK, Esq., of Concord, Mass., has raised the finest crop we have seen this year, and would undoubtedly communicate to you his mode of cultivation. A liberal dressing of ashes will be quite likely to bring a good crop.

VILLAGE AND FARM COTTAGES.

The most beautiful,—and what will prove the most useful,—book which we have seen on this subject, is now before us, with the above title. By HENRY W. CLEVELAND, WILLIAM BACKUS, and SAMUEL D. BACKUS, young, intelligent, and enterprising men, and published by Appleton & Co., N. Y.

We cannot half so well in any other way give the reader a true idea of the work, as in the words of those who made it. They say—"In preparing the following pages of designs and prints, we have had in view a class, numerous and important in every community, but specially so in ours—comprehending mechanics and tradesmen of moderate circumstances, the small farmers and the laboring men generally. A moderate home, which he may call his own, is beyond the search of no capable and industrious man. It is a laudable ambition which prompts him to strive for such an object. We have endeavored to provide the villager of limited means with a plan for his small house, in which strict economy shall be combined with comfort, good looks, and substantial value.

"Convenience, facility in doing the family work, and pleasantness of internal aspect and arrangements, were our first aim.

"We believe that every improvement in the abodes of men, which renders them more neat, comfortable, and pleasing, contributes not only to physical enjoyment, but to mental and moral advancement."

These gentlemen do not seek to contribute alone to the physical enjoyment, but to the mental and moral as well, and this gives the whole work a tone and a value which it would not otherwise possess. The descriptions are prudently written by one made competent for the task by reading, reflection and observation; and he has accomplished it with as much of genuine feeling as of art.

They have not given us the perspectives on barren heaths with forbidding approaches. The surroundings exhibit as much good taste as do the architectural proportions and ornaments. Nothing that tends cheaply to embellish and render the home lovely and attractive, is omitted.

The Initial letters are gems, and the thoughts they suggest—with the exception of those of moving in May—are of the most pleasing character. The Garden has not been forgotten. Not only its outlines are given, but we have specific directions for planting, pruning, &c. Then there are selections of the best fruits, shade-trees, flowers, shrubbery, and climbing plants to complete the whole, and make it in reality, A HOME.

In reading the work, in looking at its attractions, and admiring the genius which we found on every page, and ending only with "*the end*," we felt that we were admitted to the hearts of the authors, and knew them well. And when we sought them in their seventh story, Jauncey Court, 41 Wall Street, N. Y., we found them not a whit different from the opinions we had formed.

Every person intending to build or alter a house, should own the book, which may be found at Ticknor's, 135 Washington Street, Boston.

For the New England Farmer.

AN AYRSHIRE COW.

MR. EDITOR:—The recent notice in your paper of the Ayrshire cow "Beauty" prompts me to give you a few facts touching my Ayrshire—a cow which, though not graced with the name "Beauty," was perhaps never examined by an admirer of good cows, but he exclaimed, "What a Beauty!"

She was a gift to me, July, 1846, then a three-year old heifer, some two months after her second calf. From five to seven years old, she rose as high as seventeen, and I think, for a short time, upwards of eighteen quarts; I have regretted I did not preserve a critical minute of her yield at this age. Two years ago this season—then almost eleven—*she milked six measured quarts thirty days before coming in*. The calf was dropped April 10, 1854, from which time to Feb. 22 following, (when I sent her into the country to board,) a period of 318 days, her total yield was 2618 quarts, averaging $8\frac{1}{2}$ quarts nearly per day, and giving nearly *seven and one-fifth quarts* per day, for 365 days—the entire year. I have amused myself with figuring a little farther, and ascertained that this gives 654 beer—798 wine gallons, or $25\frac{1}{2}$ wine barrels. I regret to add, that I lost this cow by milk fever, thirty-six hours after calving, in last June. I have a heifer of promise from her coming three, sired by a premium Ayrshire.

Allow me to trouble you with the remark, that the above cow, some nine years ago, incidentally suggested to me the *mode of stalling*, of which I furnished you a description, and rough diagrams, some year and a half since, over the signature "Pro Bono Publico;" from which, however, the public have derived no benefit—pardon me—it having never been published. But still there is no mistake about that mode of stalling. For upwards of eight years that cow (and others of mine,) had come out of her stall in the morning, with hair as clean as the best dressed mustache in your city. My brother, (named in the description alluded to,) put up fourteen stalls under my direction, in his "Big Stone Barn," in Danvers, some year ago, and without ex-

ception, they confirm my statement touching them, as occupied by oxen, cows and calves from six to twelve months old. My brother values them very highly. Charles Lawrence, Esq., a neighbor, who introduced them into his barn six months since, has expressed to me his admiration of them, and allows me to assure you and the public, if I choose, in his name, that they perfectly answer my promise respecting them. They use chain ties. In honor of my lost cow, please speak of them, if at all, as the "Ayrshire Stall."

Yours, &c.,

JOS. M. DRIVER.

REMARKS.—We feel obliged to our correspondent for his favors; we did not understand his diagrams sufficiently to come to a clear perception of their merits. Will take them up again.

For the New England Farmer.

GRANITE BEAUTY APPLE.

FRIEND BROWN:—I take the liberty of sending along a specimen of an apple, much prized in this vicinity, the history of which, as related by those "who know," is as follows:—Years ago, when our grandfathers and grandmothers first came to seek them a home in the wilds of New Hampshire, their only mode of conveyance from place to place was on horseback. The grandmother of the family that lived on the farm I now occupy, was one day returning from a visit to her old home and friends, mounted on a slow horse; a long ride was before her, and wishing to accomplish it in one day, she felt the necessity of using means to increase the speed of her pony. Looking about for something that would suit her purpose, she spied by the way side a slender "stripling" of an apple tree, which she plucked, *roots and all*, and came on her way rejoicing. Soon after arriving home, it being the season for setting out trees, and the subject of planting an orchard decided upon, she bethought her of her riding stick; this she took into the little orchard "to be," and with it finished a row of trees, just transplanted. It lived, flourished, and from it were taken the scions that produced these apples.

The tree is exceedingly hardy, naturally low in "stature," flourishes best in a rich gravelly soil, and bears *every year*. They are good for cooking, early, and with good care, keep till into March. I think Cole describes this apple, as what he calls the "Mother Apple;" but as it probably has a different origin, and the name not conveying any idea of the apple, and as it originated as stated above, the admirers of it, in this vicinity, have christened it the "Granite Beauty."

With this history, and with this name, I introduce this beautiful and luscious apple to the public. That the cultivators of nice fruit for home use, and for market also, may know its value, where it is known, I will just say, that in this time of great abundance of apples, when selected Baldwins bring only \$1 25 per barrel in Manchester, I can sell the Granite Beauty, for \$1 00 per bushel, or \$2 50 per barrel I took \$5 00, for 2 barrels at Manchester, week before last. Mine are the largest and nicest that I ever saw of the kind, but others can do the same, if they cultivate as I do, for "what man *has* done, man *may* do," was the motto of the ancient school-master.

I think, in reference to gardening and farming,

the old motto ought to be improved, in order to apply truthfully, and read thus—"what man has done, man *may yet* outdo." I am a farmer, and read much upon the subject, and conclude that the A. B. C.'s of farming are not learned yet.

By the way, reading has a curious effect upon my mind, especially the reading of the *New England Farmer*, for it always sets me into a "Brown study."

Thine for the earth's best products,
Ware, N. H., Feb. 25, 1856. L. BREED.

REMARKS.—The apples sent were very beautiful in shape, color and flavor, and other things being favorable, ought to be extensively cultivated.

EIGHTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY H. E. ROCKWELL.

The eighth Legislative Agricultural meeting was held in the Hall of the House of Representatives, Tuesday evening, agreeably to adjournment. The subject for discussion, as previously announced, was, "*Grasses and the Small Grains.*"

The meeting was less fully attended than usual. No member of the Executive Committee being present, Mr. W. J. BUCKMINSTER, in their behalf, invited Mr. HARVEY DODGE, of Sutton, to preside. He said, on taking the chair, the grass crop in Massachusetts was of greater value than that of any other crop in the State. It has been considerably improved within the last quarter of a century, by clearing swamps, by under-draining on clay soils, and seeding in August.

Deep plowing and manuring, as when corn is to be planted, and then sowing herds-grass, red-top and turnip seed, in July, has been beneficial. The sowing of turnip seed has been particularly useful in shading the grass seed during the hot, dry weather of August and September. In the Spring succeeding, a roller will make the surface even. It has been thought that the growth of turnips would make the grass too thin the next season; but it is not so. The rolling should be done when the soil is neither very soft nor very hard. A good crop of grass may be obtained in this way. When grass is sown with oats, it is apt to dry up in the fall after the oats are taken off. He never had an oat crop that paid for raising. He would not speak of the small grains at present, but leave others to introduce that part of the evening's discussion.

Mr. PARSONS, of Ludlow, had had but little experience with regard to the subject. He said the suggestions of the chairman as to sowing turnips with grasses was entirely new to him; it was not practiced by any one in his vicinity. They practiced the rotation of crops, plowing and planting for a few years, and then stocking down with clover. The idea of sowing grass seed with turnips struck him favorably. It is well worth consideration and of experiment, if a crop of turnips is desired, and then a crop of grass for the next summer.

The chairman suggested that he used the Michigan plow, so as to bring the sod, in plowing, entirely under; and then the brush harrow is used instead of the common harrow, and the roller the next Spring makes the surface smooth enough.

Mr. PARSONS said that the soil in his vicinity was natural grass land, and it is devoted almost entirely to raising grass. When corn, potatoes or oats are raised, it is done for the purpose of enriching the land, and then it is stocked down, and the after growth is plowed in. He thought it an excellent plan to stock with clover so as to plow it in to enrich the soil. He generally permitted the clover to become pretty ripe before it is plowed in. Clover is better than any other grass, for that purpose. The farmers in his vicinity cultivated but a small surface, but tried to cultivate thoroughly. It pays better to cultivate two acres of corn *well* than to cultivate three times that quantity, less thoroughly. There is a fine kind of grass which comes up spontaneously in the soil in his vicinity. Sometimes the grass will come in without seeding, thick and fine, on new land, with white clover and red-top, making excellent pasturage.

Mr. DAVID CHOATE, of Essex county, thought the subject under consideration one of the greatest importance. The hay crops are now the best in Massachusetts. Two tons of English hay to the acre pays better than any other crop. The great desideratum is to keep grass lands in good condition enough to produce that amount. The difficulty is, that when manure is applied on the surface, it often evaporates very much. One farmer in his vicinity had mowed a good crop from some of his fields for twenty-five years, without plowing. The Boston market, heretofore, has called for coarse herds-grass; but now, the fine grass is more demanded. Where the Canada thistle grows, it is better not to plow often. Frequent plowing, according to his experience, had caused them to spread very much. He said he was much surprised to see an article in an agricultural paper recently, recommending plowing Canada thistles to destroy them.

He never tried to raise any wheat till last year, when he raised a good crop, by sowing the wheat in drills. It is a slow process, but he thought it paid. Two quarts produced a bushel of good wheat. The wheat which he sowed broadcast, produced but little. Every farmer ought to try to raise his own wheat, and to do it if possible. Barley is a good crop in Essex county. It is worth from a dollar to a dollar and a quarter a bushel. They get from thirty to thirty-five bushels to the acre. Barley and Indian corn make an excellent material for bread, and many farmers in Essex county use it considerably, and are quite pleased with it. He had not succeeded in raising two crops of barley in succession, from the same field.

The chairman desired gentlemen to state their experience in plowing in clover, as a fertilizer.

Mr. HOWARD, of Boston, had seen the practice of plowing in clover to a considerable extent. In New York, it is considered the most important means of enriching wheat lands. He referred to an experiment made by the late Gen. HARRISON, at North Bend, in Ohio. The farmers in his neighborhood had been in the practice of plowing in the whole crop of clover. He tried an experiment on twenty-five acres. He mowed a part and plowed in the stubble. A part he pastured and then plowed in; and the crop, for several years, was as good where a part had been cut or fed off as where the whole had been turned in. If a large quantity of vegetable matter is plowed in while full of sap, it becomes acid in fermentation, and is injurious. Some soils are liable to be too loose when there is a large quantity of vegetable matter plowed in. Wheat land needs to be well pulverised and not very loose. Clover roots bring up a large portion of alkali from a great depth, to the surface; and then when plowed in, they furnish the alkali for plants that could not reach to so great a depth. Lands may be enriched, even by the crops which grow upon them. Clover obtains much nourishment from the air, and thus becomes a good fertilizer when plowed in.

As to Canada thistles he thought a good way to kill them was to cause the grass to grow about them so as to smother them. But the best way is to cut them thoroughly as fast as they grow.

Mr. DARLING, of Boston, spoke of the importance of plowing in clover for enriching the soil, as shown in a case he had witnessed in western Massachusetts. The crop of oats obtained was over sixty-three bushels to the acre.

Mr. HOWARD spoke of the importance of using a drilling machine in sowing wheat. Very few farmers in New York now sow wheat broadcast.

Mr. CHILDS, of Waltham, suggested that where he resides, the land is so rocky that they cannot be turned thoroughly with the Michigan plow. They plow in the spring and plant to corn, and then the next year, if they wish to seed down, they plant an early kind of potatoes, and dig them in August, and then sow to grass seed and turnips. They thus get a crop of potatoes and turnips in the same season, and a good crop of grass the next year.

A top-dressing to grass land does best when applied in the spring, when the grass is growing, so as to shade it some. The next best time is in September or October, when the fall rains have commenced. When barley is highly manured, it produces too much straw, and the grass which comes up with it is liable to be too slender to endure the heat and dry weather after the barley is taken off. Rye is raised in Brighton, Waltham and Watertown and vicinity; and it is believed that the straw pays for the cultivation.

The chairman spoke of having visited a farm in

Great Barrington, where, upon the same land, a good crop (about twenty-eight bushels to the acre) had been taken for twenty-eight years in succession. The soil was of a limestone character.

Rev. Mr. FARNHAM, of Boston, spoke of the value of salt-marsh hay. He had been acquainted with salt-marshes in Marshfield and vicinity, from which place much hay was formerly carried into the interior. Recently its value has decreased for some cause, he thought it might be made valuable.

Mr. CHOATE said it was now worth in Essex county, sixteen dollars per ton at the barn, and could scarcely be obtained at that price. They were accustomed to ditch the marshes to the depth of three feet, the ditches being very narrow and running parallel about sixteen or twenty feet apart. There was a great difficulty in getting off the hay, because heavy animals could not go upon the marshes.

Mr. DARLING gave the result of an experiment in raising rye. He sowed one and three-fourths acres upon new land where brush had been burned, in August; he then fed it down, and obtained as a crop, forty-nine bushels of grain and three tons of straw.

Mr. PARSONS had raised on new land, where brush had been burned, thirty bushels to the acre, many times, and from large fields. He had done this when it was sowed from the 20th of October to the last of November; and therefore he questioned whether it was any better to sow in August, on new land. Until the present season, straw had not been worth more than five dollars a ton in Hampden county. But now, as the hay crop is short, it is worth ten dollars a ton in Springfield.

REMARKS.—In the excellent remarks, above, of the Hon. Mr. CHOATE, of Essex, he expresses surprise that an agricultural paper should recommend plowing to extirpate Canada thistles. No persons plow, we believe, in this country, and leave the ground in fallows; but wherever they plow, they cultivate; and if the Canada thistle can withstand this process, it is a more obstinate plant on other lands than on our own.

For the New England Farmer.

MEASURING WOOD.

The shortest way to measure a pile of wood, is to find the height and length of the pile—five feet and six feet, for example—multiply those figures together—thirty feet—and divide by four. The answer is, cord feet—seven and one-half cord feet.

If you have a load on a wagon two tiers, which measures five feet high by three and one-half, multiply these together—seventeen and one-half, and divide by two. Answer eight and three-fourths feet.

W. D. B.
Concord, Mass., 1856.

For the New England Farmer.

WARM DRINK FOR COWS.

FRIEND BROWN:—Having been a careful peruser of your paper for several years, and not observing much with regard to warm drink for cows, I will, with your permission, give my experience during the present winter. My cow dropped her last calf August 27, 1855. At the age of four weeks it was taken away. She then gave fourteen quarts of milk daily, and continued to do so as long as the warm weather lasted. When I put her in the barn for the winter, I adopted the following plan for feeding, viz:—1 pint cob meal, 1 pint rice meal, and 1 quart shorts, with $\frac{1}{4}$ bushel cut hay, twice a day. The quantity of milk decreased daily, until she gave but seven quarts. I had allowed her all this time to drink from a tub in my yard.

I concluded to adopt another method. About the middle of December, I fed her in this manner; 1 pint oil meal, 1 pint cob meal, 1 quart shorts, mixed with *hot* water in the form of a swill, after standing half an hour. I give it to her morning and night, and one-half peck of carrots at noon. All the water she drinks is warmed in the proportion of one quart of warm water to one pailful of cold. At present, she gives ten or twelve quarts daily. Her dry hay is English rowen and husks in equal quantities.

F. E. BIGELOW.

Concord, February, 1856.

For the New England Farmer.

THE KING BIRD AND ITS NEST.

FRIEND BROWN:—The February number of the *Farmer* came to hand this day, and, as usual, I have enjoyed the perusal of it very much, and propose to say a few words on some of the articles contained therein.

The article on the "King Bird," I like very much, and agree with Mr. Fowler, in all he says, but in one particular trait, and that is, that this bird, so far as I have observed, always builds his nest on the top of a tree, where he can see in all directions, instead of a secluded place. He stands as a sentinel, and is almost sure to give the first alarm to other birds, when an enemy appears.

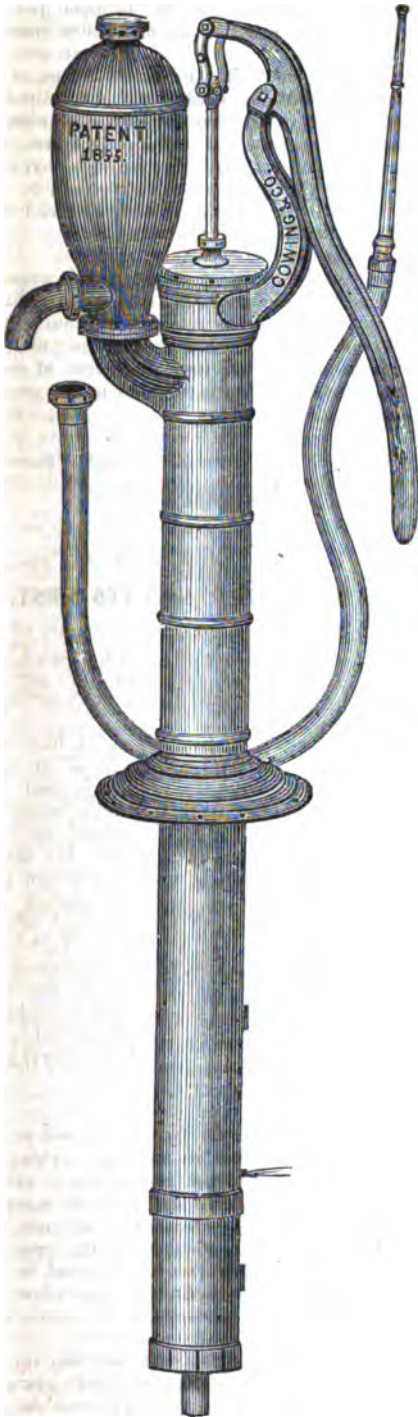
I have seen them start off from the nest after a hawk that was nearly half a mile off. They built in a tree that stood in the corner of my nursery for more than twenty years, and as long as the tree stood, and so exposed was the nest that it could be seen in the road for more than fifteen rods each way.

B. F. CUTTER.

Pelham, N. H., 1856.

CANKER EGGS.—Now is the time to rid young trees, and such branches of older ones as can be reached, of the eggs of the canker-worm. They are found in patches of all sizes, up to as many as one or two hundred in a patch. They are attached to the stem and twigs, particularly in the crotches of the boughs; and can be readily detected by the eye, aided by the strong light from the snow beneath. They may be scaled off with the fingers and destroyed. If thrown on the ground they are apt to hatch, and the worms thus find their way up the trees. Hundreds and even thousands of eggs may be removed in this way with very little trouble, and in a very few minutes.—*Boston Journal.*

ENGINE PUMP FOR WELLS AND CISTERNS.



A good pump on the farm is exceedingly desirable. It ought to be one not easily put out of order, one that will throw water rapidly, that may be readily prevented from freezing, and that can be purchased at a moderate price. The pump figured above promises all these, excepting the moderate price. A majority of our farmers ought to procure a good pump at a less sum than twenty dollars; but if this one will accomplish all that is said of it in case of fire, watering plants, washing windows, &c., they are points which must be considered, and may make this pump really cheaper than many of those now in use. It is manufactured by COWING & Co., Seneca Falls, New York, and they speak of it as follows:—

This newly invented pump we deem the most practical and useful improvement of the age. It is not only adapted to the ordinary uses of a well or cistern pump, of superior and decided advantages over all other pumps, but combines the principles of atmospheric pressure, or suction, with the force pump; and having the patent ventilating air-chamber, is calculated to throw a constant and steady stream, and by simply tightening the nut on the top of the air-chamber, and attaching the hose in the place of the spout, (which can be done in half a minute,) it is at once converted into an engine force pump, and with the power of one man a constant stream of water can be thrown seventy or eighty feet horizontally, or over a two-story house, with ease, and by attaching sufficient hose, water could be carried over the entire premises.

It is particularly adapted as a safe-guard against fire, the washing of windows and carriages, laying the dust, showering the flowers, &c. It is simple, strong and very durable, being made entirely of iron, and it will do good service forty or fifty years, with the trifling expense of a new packing and valve of leather, once in five or seven years, at an expense of twenty cents. The piston rod works through a stuffing box at the top of the pump, making a tight top, which prevents impediments being put in. The plunger or bucket at the lower end works in the cylinder some three feet below the platform, or top of the well, where is a small let-off, which entirely prevents freezing in winter,—provided the well is covered tight.

Directions.—When used as a common pump, with the spout attached, the nut on the top of the air chamber should be left loosened up about two turns. But when used as an engine, with the hose attached in the place of the spout, the nut on the top of the air chamber must be screwed down tight.

The shop price of this pump, including three feet of hose and the discharge pipe, is \$20; extra hose, two ply, per foot, 25 cts.; extra hose, three ply, per foot, 31 cts.; extra brass couplings, each, 75 cts.

This pump should be used in wells not exceeding thirty feet in depth. For wells exceeding that depth, there must be an extension of the cylinder or working part of the pump, at an extra expense of 75 cents per foot.

State or county rights for sale.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 6.

COUNTRY LIFE.

Whoever attempts to explain the causes of the agricultural wealth of England, must not omit, as among the most important, the taste of the wealthier and more influential part of the nation for a country life.

This love of a country life is not of yesterday's birth, but dates from the earliest history of the English people, and is part of the national character. Both Saxon and Norman are children of the forest. Combined with a spirit of individual independence, these barbarous races, of which the English nation is composed, had all, instinctively, a turn for solitary life. It was not so with the Italians, the French nor the Spaniards, who early manifested a predilection for town life. From the days of King John to the present time, it has always been among the country or rural population that the true national character was to be found; the fighting people are of the rural districts, not of the towns. The present war is most warmly espoused by the country population. Everybody in England desires to become a landed proprietor; those who make fortunes buy land. When a man has had the misfortune to be born in the town, he tries to conceal it as much as possible. Everybody would be born in the country, because a country life is the mark of an aristocratic origin, and when a man happens not to be born there, he wishes, at least, to die there, that his children may inherit the prestige. Look at a list of the House of Lords, in official publications, it is their country residences, and not their town addresses, which follow their names. It is the same with the members of the House of Commons as with the Lords. All those who have country residences take care to have them indicated as their habitual residences. Appearances in this respect correspond with fact; members of both Houses are scarce more than visitors in London. Show and splendor are reserved for the country, as are the interchange of visits, fetes and pleasure parties.

The English sovereigns show the same predilection for a country life as their subjects, living, as they do, as little as possible in town. Both Prince Albert and Queen Victoria take a real pleasure in farming. The Prince has a farm at Windsor, where the finest cattle in the three kingdoms are bred and fattened. His produce generally gains the first prizes at the agricultural shows. At Osborn, where she spends the greater part of the year, the Queen takes great interest in her poultry yard; and the newspapers have lately announced a cure which her majesty has discovered for a particular disease among turkeys. We may laugh at this, but the English take it very seriously, and are happy to see their Princes thus occupied. I judge the Queen keeps country habits of early rising also, for, the other day, when the King of Sardinia was obliged to leave in the 5 o'clock train, the Queen breakfasted with him at four in the morning.

All the literature of England is marked with this distinctive trait of the English character—love of the country. England is the country of descriptive poetry, most of her poets have lived in the country, and sung of it,—Spencer, Shakspeare, Milton, Cowper, Thompson and Gray.

The beneficial effects produced upon land by the

habitual residence of families at their country places, may easily be conceived. In other countries, field-labor goes to pay for town luxury; in England town work pays for the luxury of the country. Almost everything which the most industrious nation in the world can produce, is in England consumed for the benefit of farming. The proprietor takes a pride in his place, and lays out his pride productively; just as in cities, it is spent in folly from example and rivalry.

We, alas, are far from this state of things. Yet improved means of communication make a constant residence in the country compatible with the pleasures of society, cultivation of mind, or even the amusements of town life. Mr. Webster, almost alone of those among us who have removed to the city and grown great, was true to his Saxon and Scotch blood, and the love of the country which belongs to our race.

I should point to three, as above all others prominent causes of the agricultural wealth of England—first, the expansion of commerce and manufactures, which furnishes markets for the products of agriculture—second, to the English love of country life—third, to the spirit of freedom indigenous in the English race.

M.

For the New England Farmer.

SOUTH DOWN SHEEP.

MR. EDITOR:—In answer to I. Dimon's second question, I would say the *South Down* sheep combine as many good qualities as any that are adapted to our soil and climate. "The *South Down* will subsist on short pasture, but well repays full feeding, it attains early maturity, is hardy and prolific, frequently producing two at a birth," producing wool of fair medium quality, and to my eye, the most beautiful in form of any sheep I know. The bucks of this breed seem to be more particularly adapted to crossing with our common mixed merinos than those of the other kinds of "mutton sheep." The first cross of this kind usually produces an animal very similar to the *South Down*, in form and disposition to fatten; and, if the ewes are fine woolled, with quite an improved fleece. Some of the nicest sheep I know, are what I will call *South Down merinos*, being large, handsome, and excellent nurses, and yielding good fleeces of wool.

The quantity of grain that sheep require varies so much, depending on the condition of the flock at the commencement of the foddering season, that no definite rule can be given; no animal is more ready to repay, with interest, good care and generous keeping. As a general rule, about one gill of Indian corn per day, with good hay, will be sufficient, but if early lambs are wanted, perhaps half a pint per day would be better, until the lambing season, when oats should be substituted, as they are not so heating. You may gradually increase the quantity to nearly a quart per day, if you want very nice lambs, and if the ewes can have roots in addition, so much the better. Early lambs, from sheep fed and managed in this way, will bring, at four months old, pretty nearly five dollars per head. Lambs that are dropped late can be raised much cheaper, but the market for such is not good.

The *Leicesters*, *Cotswolds*, &c., are much in favor with some, and are doubtless good kinds of sheep for some parts of the country; but I am not in favor of over large breeds of animals for New

England. Were I to name the kinds of stock for a farm, I would say a good Morgan horse, Devon or native cattle, South Down sheep, Suffolk pigs, and Dorking or native fowls. By native fowls, I mean those beautiful old-fashioned fowls that were generally found on most farms in New England thirty years ago. But I am getting off from my subject, and will stop before I get to writing my dislike of all over-grown combinations of ugliness and bones.

Rye for early spring feed would no doubt be good for sheep and lambs. I have not tried it myself, but have heard those who have, speak of it in high terms.

T. B. BUFFUM.

Newport, 1 mo. 3, 1856.

For the New England Farmer.

NIGHT SOIL—GAS LIME.

MR. EDITOR:—Every farmer has some method by which he performs his labor; he plows his ground about such a time, and about such a depth, and uses about so much manure to the acre. He is either governed by his own judgment, or by the way his father did before him, or by his neighbor, or, perhaps, by some theory advanced in some agricultural journal which he may read.

Now, what we all need, is the *right* method, or that method, by which from a given amount of labor and cost, we can attain the greatest results.—We need more light, more freedom of opinion, a greater interchange of expression in our agricultural experiences. I have enjoyed much pleasure, and derived some benefit, I trust, in perusing the *Farmer* the last three years, and although there has been some opinions expressed, some theories advocated, which I could not endorse, yet, if farmers in general were to adopt and practice much that comes to us in it, we should not only be wiser, but it would soon be manifested by our elongated purses.

But my object in writing, is, to gain some information. Living in the outskirts of a city, I hauled and mixed with other manures, last winter and spring, some thirty or forty loads of night soil. Now I wish to inquire if you or any of your correspondents can tell me its relative value compared with other manures, and for what kinds of soil it is best adapted. (a.) The course I pursued with it was to mix it in the spring with the barn-yard manure, (say one part of the former to five of the latter,) hauled out the fall previous, a large share of which was poor soil carted into the yard as an absorbent. It was then plowed in for sugar beets, carrots and onions, and mostly plowed in for corn, but a little was put in the hill to give it a start in the first part of the season. I used about twenty cart-loads to the acre, and had good crops. But if others have used it more successfully by a different management, I should be happy to hear of it.

Will you please inform me of the nature of leached lime, and if of any value for wheat crops, and for what kind of soils it is best adapted. (b.)

Newburyport, Jan., 1856.

J. M. M.

REMARKS.—(a.) We should judge that the night soil you speak of, *mixed with other manures*, ought to afford the highest fertilizer that can be found, and if applied plentifully, on good land, would produce seventy-five bushels of corn to the acre.

(b.) If by "leached lime," you mean gas lime, that is, the refuse lime of gas works, it should not be wasted. Some writer says it may be used with good effects under the following circumstances:

1. It may be used directly upon mossy land, upon naked fallows, and in spring, when preparing for turnips.

2. In composts, in which the whole of the soluble salts of lime will have a tendency to be converted into gypsum by the action of the air; and consequently the benefits which result from a large application of gypsum will be obtained by laying such composts upon the land.

3. As it appears to contain only a small proportion of caustic lime, it may with safety be mixed at once with barn-yard or other animal manures, though not in too large quantity. It may also prove a valuable admixture with guano, on which its action would ultimately be to fix rather than to expel the ammonia.

4. Strewn sparing over the young turnip plants, it is stated that it prevents the attack of the turnip fly; and harrowed in, when the ground is naked, if the quantity be considerable, slugs and wire worms disappear from its effects.

5. If applied in too large quantity, it is liable to be injurious to crops of young grain. But grass lands, though at first browned by its application, soon recover and repay the cost by yielding a greener and an earlier bite in the spring.

For the New England Farmer.

SNOW-BOUND FRUIT TREES.

MR. EDITOR:—How is the mild weather affecting our snow-bound fruit trees? The snow in most sections is so exceedingly drifted as to bury the lower branches of even our largest fruit trees. Farmers are well aware of the effect of a thaw under such circumstances; the snow becomes more and more condensed, and presses the branches farther and farther down; the dark color of the bark draws the heat of the sun, and the surface snow close home to the buried branches is thus melted, and the water taking the submerged part as a spout, runs down till it congeals, when a frozen crust is formed beneath the surface, which bolts them down in the snow-bank, and the branches are now ice-bound as well as snow-bound. Under this double attachment they must succumb; they gradually separate from the tree, and usually break off close home to the parts from which their growth commenced, taking with them a full share of bark. When Spring returns, the unfortunate fruit-grower, in the midst of his injured trees, learns a lesson that he will not soon forget, provided such an old-fashioned winter returns often enough to jog his memory.

I was impressed with the importance of examining fruit trees, just now, by seeing to-day on a hill-side a young Northern Spy which had been robbed of half its wood by the above process, besides having the bark below torn off in long strips half-way around the trunk. On looking further, I found the branches of a larger tree deeply buried in the snow,

and one of them, about two inches in diameter, drawing like a bolt from the parent tree. What should a stranger do in such a case,—leave things to their natural course, and the owner to learn a lesson when Spring returned? No, Mr. Editor; true, in one sense it was none of my business; but in a higher sense it *was* my business, if I have read the Bible correctly; besides, a fruit tree is too noble and generous a thing to see it injured without a feeling of regret, and an impulse to save it. So I set to work, and in fifteen minutes had the pleasure of liberating a fine tree from the grasp of the snow king. The branches sprang out of their chill prison with a bound that seemed like joy, and I felt that I was thanked. For the future, I shall regard that tree with additional interest.

If the views at the close of this article are correct, every one will see that they have a far wider application than is here made of them. J. G.

Marblehead, Mass.

For the New England Farmer.

ORNAMENTAL GARDENING.

Ornamental gardening is one of the fine arts. It is classed with painting, and sculpture and architecture. It is justly reckoned with those arts, for it is founded upon the same principles in the mind, and calls into exercise the same powers. The love of the beautiful, of fitness, of harmony in form, in color, and proportion, are the basis of all the fine arts. Ornamental gardening was formerly one of the luxuries of princes and nobles. Poets and travellers tell us of the beautiful gardens of the east—of the groves of spices, and the fields of roses—the avenues of trees, and walks bordered with flowers, the grottoes, and arbors, and water-falls, which adorned them. Ornamented grounds were no less valued than painting and statuary. Indeed, painting and sculpture and architecture were put in requisition to ornament the garden. No palace was completed, until the grounds were wrought into forms of beauty, and covered with the beautiful forms which spring from the bosom of the earth. But ornamental gardens are no longer a luxury confined to the great and the noble. The increase of intelligence, and taste and wealth, have converted many things that once were luxuries into the comforts and even necessities of life. Every man who cultivates even a small patch of ground, and who has a taste for beauty, can ornament his culture; can mingle with those plants which are sweet to the taste, and which are designed to nourish the body, such as are pleasant to the sight, and such as shed an agreeable fragrance around him. In Europe, ornamental gardens are laid out by artists, and cultivated under their direction. An artist is there as indispensable as an architect. Several gentlemen in this country are devoting themselves to the cultivation of the art of landscape gardening, and are doing much to promote ornamental and tasteful culture in the vicinity of our large cities, and much to improve the public grounds of the cities themselves, and thus to cultivate and gratify the taste of the citizens.

Men of wealth, and those who have little knowledge of cultivation, and little time to devote to it, and who wish to create rapidly a world of beauty around them, may employ the artist. But every farmer should be his own artist. Nature has implanted in every man, the love of the beautiful, and

every man should cultivate the taste which nature has given him, and it will become to him a source of pleasure and enjoyment. Every man cannot paint, but every man can make a picture. The farmer has not time, or patience, or the cultivated taste necessary to success in painting. But the farmer can make a beautiful garden, and what more beautiful picture can anywhere be found, than a well-arranged, well-cultivated garden? The cultivator can make a garden anywhere; among the rocks, upon the steep declivity, he can form a terrace; by the side of the brook, around the pond, or along the borders of the marsh, he can make beautiful flowers spring up. He can plant flowering shrubs, or climbing vines, or fruit-bearing trees. He can form beds of rich vegetables, and borders of roses, or pinks and verbenas. He can arrange them in straight lines, or curved lines. He can form them into parallelograms or squares, into circles or ellipses, into triangles or hexagons, into any forms that may please his fancy, or best suit the nature of the ground. He may so arrange the vegetable forms that spring from the soil, and which are beautiful in themselves, and so combine their shade and hues, as to increase and brighten the beauty of the whole. And he can set the picture in a beautiful frame. He can surround his garden with trees—evergreens, forest trees and fruit trees, so arranged as to give shade to those plants that require it, and to protect all from the cold winds. By doing a little at a time, by adding one improvement after another, and one beauty after another, every farmer may, in a few years, create a beautiful scene around him that will amply reward all his pains.

A garden thus formed by degrees, is much better than one produced at once, and by a large outlay of labor and money. The pleasure of creating it is prolonged, and the expenditure being but little at a time, is not felt, and in this way, new flowers, and vegetables and fruits are added from time, that yield new pleasure, and add new beauty to it. A beautiful garden is a source of pleasure to the family. The wife and children can here indulge their taste, and study the beautiful forms and wonderful instincts of nature. It is one of the most fruitful sources of instruction. The farmer can here bring his children around him, and speak to them of the wisdom, and skill and benevolence of the Creator. He can dissect flowers, and plants and seeds, and show their curious structure, and how wonderfully nature has provided for their preservation.

This is that one of the fine arts which the farmer can cultivate. It is the one that is suited to his condition and circumstances, and by the cultivation of it, he can gratify the love of beauty that nature has given him; and while he is gratifying this love, he is improving his intellect and his heart. The mere allusion to this part of the subject will suggest a multitude of pleasant thoughts to the mind.

The cultivation of a garden is a source of recreation to the farmer. His strength and time are severely taxed in cultivating the staple products of the field. Like all men, he needs relaxation and recreation. Where can he find it so well as in his garden? It will make him fond of his home. It will keep him from temptation. Instead of seeking pleasure in the store and the tavern, he will find it in his home. How many a young farmer, had he early commenced the cultivation of a beautiful garden, would have been saved from ruin.

This is a subject that needs to be urged upon the community. Every improvement in agriculture meets with opposition, and works its way slowly into use, especially if it does not yield immediate profit. Editors of agricultural papers have a work to do with regard to this matter. They must press it upon the attention of the cultivators of the soil. Every man of taste should seek to interest his neighbors, and especially the younger portion of them, in the subject. By-and-bye it will take hold upon the public mind, and add greatly to the beauty of our land, and increase our attachment to our beloved country. It will surround our homes with associations of beauty, and memories of pleasure and joy, that we shall carry with us wherever we roam, and that will never forsake us, till we lie down to our final repose in the bosom of the earth. R.

Concord, February 20th, 1856.

For the New England Farmer.

SMALL MATTERS WORTH KNOWING.

BY PROF. J. A. NASH.

Corn planted three feet apart each way, gives 30½ hills to the rod, 4840 to the acre, and 48,400 to a ten-acre field. Allowing 5½ hills to the rod for the worms and crows, it would leave 25 hills to the rod, 4000 to the acre, and 40,000 to a ten-acre field.

Planting four feet apart each way, gives 19 9-64 hills to the rod, 3062½ to the acre, and 30,625 to a ten-acre field. Whether the crows and worms would find as many hills four feet apart, is not a matter for mathematical calculation, but supposing they should destroy 62½ hills to the acre, there would be left 19 hills to the rod, 3000 to the acre, and 30,000 to a ten-acre field.

It is manifest that about 4000 hills are to be expected from 3 feet planting, and about 3000 from 4 feet. A pint to a hill on the 3 feet planting, will give 62½ bushels to the acre. A quart to the hill, (and I would quite as soon undertake to get a quart from 4 feet planting as a pint from 3 feet,) will give 93½ bushels, allowing 4000 hills to have escaped all accidents in one case, and 3000 in the other. The corn plant seems to have no objection to two or three very near neighbors; but it wants all others to be remote:—as if it would say to anything within less than four feet, except its bosom companion of the same hill, as Diogenes in his tub said to King Philip—"out of my sunlight."

Owing to this strange sort of propensity, if I may so call it, or rather owing to unknown causes—possibly to the generation of vegetable warmth, as pigs profit by each others' animal heat in a cold winter's night—four stalks of corn will grow quite as luxuriantly in the smallest space possible, as one of them would have grown alone; but are annoyed and put back if other hills are too near. Nothing is lost by planting the kernels in a hill thickly together. I would as soon have a corn-planter that should leave them in actual contact, as one that would scatter them over a square foot. Whether, like the pigs, they keep each other warm, by close packing, each generating a kind of vital heat, by which all the others are benefited, or what may be the true cause, I know not; but the fact is certain, that three or four stalks in a circular inch will do as well, and each will put forth as extended roots and as broad leaves and as long stalks, and just about as many and as full ears as if there were but one.

It would seem as if there was an influence of corn plants upon each other, calorific, electrical or some other, not yet known, favorable within short distances only, and that for this reason, whatever it may be, nothing is lost by putting the seed in juxtaposition. But much has been lost in this country, both in the increase of labor and in the diminution of crop, by planting the hills too thickly. Four feet each way, giving in round numbers, 3000 hills to the acre, is the best distance. If the corn be of a very small kind, it may be nearer together. But who wishes to raise such corn, unless it be in some cold mountain region, much exposed to May and September frosts? Or if you wish to grow a corn crop on hard, uncomfortable land to till, it may be well to fill the soil with manure and plant 3½ feet instead of 4, calculating to raise the heat of the soil by the fermenting manure as a sort of compensation for shutting out the sun, and so to get your allowance of corn by the cultivation of as small a piece as possible. But in proper corn land, ordinarily manured, 4 feet planting will give more corn with less labor.

In 3 feet planting, the length of row is 5½ rods to the square rod, 880 rods to the acre, and 8800 rods to a ten-acre field. In 4 feet planting, the length of row is 4½ rods to the square rod, 660 rods to the acre, and 6600 to a ten-acre field. To plow out, or to cultivate a ten-acre field, planted at 3 feet, twice to a row, the horse walks 55 miles; in plowing ten acres, at 4 feet, he walks 41 miles, 80 rods.

In planting a ten-acre lot, at 3 feet, the planter walks 27½ miles. In planting the same, at 4 feet, he walks 20 miles, 200 rods. If in planting in the old way with the hoe and pouch, it requires five distinct motions to a hill, it will require 242,000 for a ten-acre lot, at 3 feet; and 153,625 for planting the same at 4 feet. On land not uncommonly feasible, the latter would be ten good days' work; and the former, at the same rate of time per hill would be upwards of sixteen; but as one would plant hills near each other in a little less time, say fifteen.

If there should ever be brought into use a horse-planter, which would plant two rows at a time, and be so light of draft as to be easily drawn by one horse, and would yet do its work well, this work could be done in one day by a single horse and a man. The travel, in case of 3 feet planting would be 14½ miles; and, in case of 4 feet, would be 10 miles, 100 rods.

The expectations of such a planter would appear visionary to most men; and so did that of a steam-boat to the cotemporaries of Robert Fulton.

J. N.

For the New England Farmer.

WILLOW FENCES.

MR. EDITOR:—"A. B." inquires through your paper concerning willow fences. Now I have had some experience that way, and am willing to tell him what little I know about it. I should say that some varieties of the basket willow are good for fences,—the strongest growing sorts that are used for osiers, such as the "Beveridge;" I think they will do well in land that is tolerably moist. The ground should be prepared by spading and manuring, and the willows should be kept free of weeds and grass until they get a good start. I put them about twenty inches to two feet apart, though I

think they would do well as near as a foot. The strongest cuttings I could get were from the use of wood three or four years old, and set them a foot to fifteen inches in the ground, and three to four above; but unless the ground is moist, many of them will die in this way; it is better to cut the tops shorter. If it does well, in four or five years it will make a pretty good fence. Cattle will not browse it much only on the sides. A great deal of good willow for basket-making could be raised in this way on division fences. I have some such fence, but I planted poor sorts of willow years ago, before I was posted up in these matters.

Newton Centre, Jan., 1856.

J. F. C. H.

NINTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY H. E. ROCKWELL.

The ninth Legislative Agricultural meeting was held Tuesday evening, as usual, in the Hall of the House of Representatives. The meeting was called to order by Dr. FISHER, of Fitchburg, at half-past 7 o'clock, who announced that the subject for discussion would be, "*Indian Corn, as a grain and as fodder.*" He then introduced Hon. JOHN BROOKS, of Princeton, as the Chairman of the meeting.

Mr. BROOKS spoke of the relative importance of the corn crop, which he considered quite as valuable, as a crop in Massachusetts, as in any other State. The average crop in this State is from thirty-one to thirty-five bushels to the acre, and the price at which it is sold makes it more profitable here than in Illinois, where they raise on an average not more than thirty-six bushels to the acre. He then urged gentlemen present to give their views on the subject as announced, or to state any fact having a bearing on the subject of corn culture, every fact being of importance to farmers.

Mr. FAX, of Lynn, stated some of the results of his experience. He considered corn as a hungry feeder, and therefore he wanted to have the land in a high state of cultivation. Generally, he planted on land which had been in grass; and he plowed in the fall, and in the Spring put about twelve cords of manure to the acre. He planted about three and a half feet apart in drills, striking out the drills with a plow, and dropping the corn without reference to hills; and he did not hill up the corn by hoeing, but used a cultivator. The best manure was that which had been composted in winter, or plowed in to the ground in the fall preceding, so that it might compost in the soil.

The addition of plaster, at the rate of one hundred pounds to the acre, or of ashes, will always increase the crop, even though the ashes have been leached. He had found little difference in the effect, whether the ashes were applied after the corn had come up, or were put in the hills before.

As to the time of cutting, he said he cut as soon as it is glazed, and stacked it up in shocks and allowed it to cure in that way. After it is brought

into the barn, and the corn removed, the stalks are salted when put away for fodder. In feeding it out, he cut the stalks very fine, added a little meal and water, and allowed it to stand and ferment forty-eight hours. He had never seen cattle kept on so little fodder as by this method of feeding. Cattle of all kinds feed upon it greedily.

AMASA WALKER, of Brookfield, was glad to believe that more and more attention was being paid to the cultivation of corn, and especially to the use of stalks for fodder. There is a necessity for providing something to meet the failure of the grass crop by drought, which often occurs in August; and corn is well adapted to the purpose. The manure best suited to corn is that which has been somewhat fermented. Barn cellars for composting, were becoming very common in his vicinity, he said, and more efforts are made to secure all the manure possible. He said that during the last year he had tried phosphate of lime, which had a wonderful effect, making a hundred per cent. difference in the crop. The phosphate used was that manufactured by DeBurg. Many farmers in his vicinity had tried it, and in all cases it proved successful. He had found it valuable on grass land with a clay soil. The line where the phosphate of lime was sown was perceptible as far as the field could be seen. He found that its effects appeared to be increased in proportion to the amount applied, which is not the case with guano. The first crop of grass was from twenty-five to thirty per cent. better where it was applied; and the second crop was a hundred per cent. better. If the quality of phosphate can be kept as good as that used in his vicinity, it would prove exceedingly valuable as a fertilizer. In answer to an inquiry, Mr. W. said he applied four hundred pounds to the acre of corn, putting it into the hill with the corn. The great argument in its favor is that it is so simple and easy of application, and much more safe than guano, there seeming to be no risk in its use.

Mr. MOSLEY, of Westfield, spoke of his experience in the use of guano. Five years ago he got a ton of genuine Peruvian guano, and sowed about three hundred pounds to the acre on old pasture land, as poor as any in the world, and harrowed it in thoroughly, and then brushed the land, and then planted his corn. He did not think a hill failed to come up, and by its application he got twenty bushels more to the acre. The next year he sowed one hundred and fifty pounds to the acre, and it gave him twenty-three bushels to the acre additional. He had found three hundred pounds to the acre better than a hundred loads of manure. If he was to have one hundred dollars worth of common manure or three hundred pounds of guano offered him, he would prefer the guano. He had found it useful when applied to corn for two years in succession. He cautioned those present to be sure to

get the Peruvian guano, for he could not warrant any other; but that he considered it a perfect manure. He raised two hundred bushels of corn this year on land that would not have borne white beans by the use of one ton of guano. [Quantity of land not stated.] The guano was applied in a finely pulverized state. He carried it into the field in that state, and mixed it with some of the earth of the field, whatever it might be, and then sowed it. In answer to a question from the chairman, he said the average crop was fifty bushels to the acre in his vicinity, and where manure is applied freely and guano used, they get from sixty to seventy-five bushels. When asked what was the average cost of cultivation to the acre, he said he had made no figures, and rather humorously suggested that if a farmer were to do that, he would fail twice in a year, a statement which produced incredulous smiles.

Mr. WALKER further urged farmers to try the use of the phosphates and of guano more, with care to record the results of their experiments. He was earnest in his advice to cultivate corn more.

Mr. COOLEY, of Conway, found corn the most profitable crop he could raise. He raised it on the same field two years in succession, the first year applying twelve to fourteen loads of compost—half muck and half barn-yard manure—to the acre, and the second year, applying twenty-five loads to the acre; he obtained seventy bushels to the acre, which weighed in January sixty-four lbs. to the bushel. According to his calculations it cost him forty-eight cents per bushel.

Mr. OSGOOD, of South Reading, thought there had not been sufficient attention given to raising corn for green fodder. He said that he had formerly been employed in buying butter and cheese for the Boston market, and always found the best to be produced where farmers fed green corn in the case of failure of their pastures. Last year he planted a piece of very poor land,—pine plain land—and applied a compost of night-soil and coal ashes, and raised as fine a piece of corn for fodder as he had ever seen. On a part of the same land, he applied well-rotted, barn-yard manure, liberally, and the crop was not as good as in the other case. On feeding green corn as fodder, he had found his cows to increase in their quantity of milk, giving nearly as much in the fall as when fed in the pastures in June.

Mr. EMERSON, of Boston, wanted to have some information as to the best kind of corn to be planted. Last year he planted a kind of eight rowed corn, which did not get ripe on his farm, which is in New Hampshire.

Mr. WALKER recommended the use of the kind called the King Philip corn. His own ripened thoroughly, and was ripe sooner, by a fortnight, than that of any one in the town. It is a productive corn also.

Mr. DODGE, of Sutton, had been experimenting with a small kind of corn, which he called Tip corn. He planted it in drills, and quite thick; he procured a large crop. He had found an objection to the King Philip corn that it had a large stalk, and sometimes it did not ripen on his land. There is a singular fact, that while all crops of the root kind have deteriorated, corn, which is indigenous here, maintains its character. He knew of one farm where the same kind of corn had been planted for seventy years, and never changed or mixed at all. He had found corn to be his most profitable crop. Many farmers say they cannot afford to raise corn. But corn can be raised for fifty-eight cents per bushel. If so, it is a profitable crop in this State.

Pork can be made from corn, and the raising of pork will help in increasing the manures. He had not been successful in the use of the phosphates. In the purchase of guano, he had reason to believe that farmers were often imposed upon. He spoke strongly in favor of corn fodder for cows. He knew the cow of a neighbor that gave a good quantity of milk through the winter and appeared well in the spring, having been fed only on corn stalks.

Mr. W. J. BUCKMINSTER thought too much could not be said in favor of the cultivation of corn. Nothing makes a farmer feel so rich as a good crop of corn. He exhibited some specimens, which he supposed to be the Brown corn, which was very handsome indeed. It is an eight-rowed corn, with a small cob and stalk, and filled out perfectly at the tip.

He sowed considerable corn in drills for fodder and some broad-cast. In both cases, he obtained a large crop. In curing, there is a danger of making the stalks too dry. Even if they mould a little, cattle will eat them better. For fodder, he was rather in favor of the sweet corn. Gen. CHANDLER, of Lexington, had told him, he said, that he had raised a certain kind of sweet corn for twenty years, and he had found it very excellent. His cattle will pick out the stalks of sweet corn from a mixture of different kinds, showing that they prefer it.

Mr. HOWARD, of Boston, spoke of the varieties of corn which are recommended. Among them he said there was one which had obtained great celebrity under the name of the Wyandott corn. But it has been known in Western New York as the Tuscarora corn, and it is of a white and tasteless kind. The earliest kind of sweet corn is known as the Darling corn, from the late Judge DARLING, of New Haven, Connecticut. It is very sweet and very early.

TO CORRESPONDENTS.—A beautiful article on "Woman's Influence" in rural life, by a lady, one on agricultural affairs in Nova Scotia, and several others on various topics, have been received and will be given in due time.

For the New England Farmer.

PORTRAITS

FROM THE FIELD AND FARM-YARD.

BY WILSON FLAGG.

THE BLUE JAY.

If we visit any part of our forest, or if we live near an extensive wood, in the winter, we are sure to be greeted by the voice of the lively Blue Jay, another of our well-known winter birds. He is recognized by his elegant plumage of different shades of blue; his pale azure crest and head, adorned with purple silky plumes; his black crescent-shaped collar; his wing or tail of light blue, with stripes of white and black, his harsh voice, and his lively and querulous manners. A constant resident in our woods, his voice may be heard at every season; but like that of the crow, it attracts particular attention only in the winter, when the most of the birds are absent. He is a true American, being known throughout this continent, and never visiting any other country. Though a beautiful bird, the farmer, who is well acquainted with his thieving habits, is no friend to him; for he takes not only what is necessary for his immediate wants, but hoards nuts and grain in large quantities for future use. When engaged in his foragings, he is in general extremely noisy; but as proof of his wariness, when he ventures into the barn to take what does not belong to him, he is silent and stealthy, and exhibits all the peculiar manners of a thief.

The Blue Jay is never absent from our woods, and in the winter, like the Chickadee and the Woodpeckers, he seems greatly to enliven them by his loud notes and his brilliant plumage. At this season he has no opportunity of doing mischief, either by plundering the cornfields, or by robbing the smaller birds of their eggs; and as most of the trees are leafless, he is more easily seen, and hence there seems to be a greater number of Jays with us in winter than in summer. His characteristic traits are extreme activity and irascibility. He is never still, and always seems like one who is out upon some expedition. His irascibility is particularly manifested when one ventures near his nest. I found a nest of this bird when I was a boy; and on climbing the tree to examine its contents, the old birds flew round me, aiming their blows at my face and eyes with so much determination that I hardly dared to stay long enough to ascertain the color of the eggs. At the same time they raised such a hue and cry, that in less than a minute a dozen others had assembled, and commenced screaming at me with a vengeance which I had never before, and have never again experienced. I have ever since that time been persuaded that the Blue Jay has but little of the meekness of a dove, and that it would never tamely submit to molestation or injury.

At certain times I have heard this bird utter a few notes that somewhat resemble the tinkling of a bell, and which, if syllabled, might form such a word as *dilly-lilly, dilly-lilly*; but the strain is not considered a song. Indeed, there is nothing musical about him, as in all his imitations of other sounds, he seems to prefer the harsh to the melodious, such as the voice of the hawk and the owl and other noisy birds. He seems to have considerable talent for mimicry, often exercising it in a wild state, and still more when caged and domesticated. He may then be taught to imitate human speech, like

the parrot, to counterfeit certain mechanical sounds, to frighten the cat, and whistle after the dog.

The Jay is an industrious consumer of the larger insects and grubs, and in this way atones for some of the mischief he performs. In this respect, however, his services are not to be compared with those of the crow, or the birds of the woodpecker tribe; but he is one of the most cheering tenants of our woods at a season when they have but few inhabitants. It is not often that we are led to reflect upon the extreme loneliness that would prevail in the fields and woods, in winter, were all the birds to migrate, at this season, into a warmer climate, or go into a state of torpidity, like the frogs, dormice, and other smaller animals. But the beneficence of nature has provided that certain birds should be endowed with power to endure the cold, and with a faculty of providing for their wants, at a time when it would seem that there was not sustenance enough in the woods and fields to keep them from starvation. The woodman, however insensible he may seem to the charms of all such objects, is gladdened and encouraged in his toils, by the sight of these active creatures, some of which, like the Jay, are adorned with the most beautiful plumage, all pleasantly garrulous, and filling the otherwise silent woods with constant and vociferous merriment.

To those who look upon nature with the feelings of a poet or a painter, we need not speak of the value of our winter birds as enliveners of the landscape. Any circumstance connected with scenery that exercises our feelings of benevolence, adds to the picturesque charms of any prospect; and no man can see a little bird or any other animal at this season, without feeling a lively interest in its welfare. The sight of a flock of Snow-buntings, descending like a shower of meteors upon a sedge-field, and eagerly devouring the seeds contained in their drooping pannicles that extend above the snow-drifts; of a company of Crows rejoicing with noisy sociability over some newly-discovered feast in the pine wood; of the little speckled Woodpeckers, winding round the trees, and hammering upon their trunks, all these and many other sights and sounds are associated with our ideas of the happiness of these creatures, and while our benevolent feelings are thus agreeably exercised, the objects that cause these emotions, add a positive charm to the dreary prospects of winter. These reflections have always led me to regard the birds and other interesting animals as having a value to mankind which cannot be estimated by dollars and cents, and which is entirely independent of any services they may render to the farmer and the orchardist, by preventing the over-multiplication of noxious insects.

BROOKFIELD FARMERS' CLUB.—This association, recently formed, held its 1st public meeting Wednesday evening, 5th inst., O. C. FELTON, Esq., President. The address, on the occasion was delivered by Hon. AMASA WALKER. This society also embraces the interests of mechanics as well as farmers, and they have united in this club. The prospects of its successfulness, we understand, are very promising. There is room for a great many more, and we hope, from time to time, to be able to record their existence.



BLUE JAYS DESTROYING ROBINS' EGGS.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 7.

CUSTOM REFORM AND HIGH FARMING.

We have shown the principal causes of British agricultural wealth. First, among these, is the strong predilection of all classes, especially the rich, for a country life. Next, political liberty, with its blessed fruits, as necessary to the prosperity of all industrial life, as is the pure atmosphere we breathe, to human life. Next, the immense commercial and manufacturing development, which, in England, furnish such materials for agricultural produce.

Our view of British agriculture is very imperfect. But we will now advert to two circumstances in its development, which astonish every observer, to wit, the customs reform, or repeal of the corn laws, and high farming, so called.

British agriculture was long protected by duties on foreign wheat, and this protection was thought to be essential to its existence. But some six or seven years ago the British corn laws were repealed, and British agriculture flourishes and has flourished since their repeal, as much as before, and without, in general, a diminution of the rents of the landlords, or of the wages of agricultural labor. The exports of other countries, especially of the United States, of agricultural produce to Great Britain, have increased enormously, since the repeal of the corn laws. Yet British agriculture flourishes, and gives indications that it will continue to flourish, with the gates of its islands open to receive the surplus produce of the world. Perhaps no one can account for this by naming few or many reasons. But among the causes which have sustained British agriculture, thus brought into competition with that of the world, has been the increased consumption of agricultural produce by the poorer and middle classes, since the repeal of the corn laws; but, more than this, the fact stands out prominent above all others, that the British agriculturists have met the crisis of the customs reform, not with faint hearts, but by allowing more capital to their lands than ever before, and by applying more skill and thought to agriculture than ever was applied before they commenced *high farming*.

Under their trial, the industrious spirit of Englishmen was set to work, with a will. First, they studied anew the character of their soil, of which they saw that nearly half was wet and clayey, and they applied themselves to the problem of drainage, and solved it. "What is the meaning of this small hole at the bottom of a flower-pot?—to renew the water. And why renew the water?—because it gives life or death; life, when it is made only to pass through the bed of earth, for it leaves with the soil its productive principles, and renders soluble the nutritive properties necessary to nourish the plant; death, on the other hand, when it remains in the pot, for it soon becomes putrid, and rots the roots, and also prevents new water from penetrating." The theory of drainage is here exactly described.

The new invention consists in employing cylindrical tiles of burnt clay to carry off the water, instead of open ditches, or trenches filled with stones or faggots—methods known even to the ancients. These tiles, which are a foot or more in length, are placed end to end, at the bottom of trenches which are filled in with earth. It is difficult, at first, to understand, without having seen the effect of these

tiles, how the water can get into them and so escape; but as soon as one sees a drained field, not the smallest doubt of the fact remains. The tiles perform the office of the small hole always open at the bottom of the flower pot. They attract the water, which comes to them from all parts, and carry it out, either into drain-pits or main drains, where the inclination of the land admits it. These tiles are made by machinery of various dimensions, and laid in trenches, at a greater or less depth, and more or less apart, according to the nature of the soil and the quantity of water to be drained off. The total cost of purchase and laying is about \$20 to the acre. It is considered that this outlay is money invested at ten per cent., and the farmers scarcely ever refuse to add to their rent five per cent. per annum on the proprietor's outlay for draining. There is something magical in the effect of draining, both upon arable lands and meadows; but it may be carried too far on grass meadows. In meadows, marsh plants disappear and the hay is more abundant and of better quality.

On arable lands, even the most clayey, wheat and roots shoot more vigorously and are healthier, and less seed is required for a larger crop. The climate itself gains sensibly by it. The health of the inhabitants is improved, and the mists of the foggy island seem less thick where draining prevails. Two million and a half of acres are already drained, and everything promises that, in ten years, the whole of England will be so. It is, as if the island were once more rising out of the sea.

The second improvement in farming, which dates from the last few years, is a large increase in the employment of machines, and particularly of steam. Previously to 1848 few farms possessed a steam engine. One may safely say that, in ten years, the exceptions will be those without them. Smoking chimneys are to be seen in all parts of the country. These steam-engines are used for thrashing wheat, cutting fodder and roots, grinding oats and oil-cake, churning, raising and distributing water; and their heat serves to prepare food both for man and cattle. Some moveable steam engines go from farm to farm to do heavy work. Machines for mowing and tending hay, reaping and digging, are now under trial. The great desire, at present, is to find means for turning up the soil to a depth hitherto unheard of, in order to give greater vigor to the arable bed.

I have already stated that the pasturage of cattle is held in high repute in England. But there is a process going on, which is at variance with all English habits, and encounters much opposition, and this is the stall-feeding of cattle, or stabulation, as it is called. The efforts making in this direction are very systematic and thorough. A cattle-house is provided, thoroughly aired, usually constructed of open plank, with mats of straw for a roof, which are raised or lowered at pleasure for the purpose of sheltering the animals from wind, rain or sun. The cattle stand loose in boxes; the floors are pierced with holes, to allow their evacuations to fall into a trench below. Beside the cattle is a stone trough containing water and others containing food. Where the cattle are intended for the butcher, the food is sometimes composed of chopped roots, bruised beans, crushed oil-cake—sometimes a mixture of chopped hay, straw and bruised barley—the whole more or less boiled in large boilers, heated by the steam-engine, and fermented some hours, in closed

vats; for milch cows the food is green grass and fodder. The manure being accumulated in the trench beneath the house, is occasionally sprinkled with earth or other absorbents, so that the absence of all smell in the sheds is remarkable. It is affirmed that the extension, by this process of stabulation, of the culture of roots, pulse crops and artificial grasses, on the pasture grounds, really gives two or three times more food for cattle.

Another feature in English farming of modern origin, is the process by which the evacuations of the cattle, after falling into the trenches, under the stalls, pass through pipes into a reservoir, where they are mixed with water and fertilizing substances, and from thence driven, by the steam engine, through a system of underground pipes to the extremities of the property. At distances of every fifty or sixty yards are placed vertical pipes and a gutta-percha tube fitted on, and a man, boy and the steam engine are able to manure five acres a day. Great results have followed this system of manuring; but it is yet only adopted by the few more ardent, enterprising and wealthy agriculturists. These are the general features of the present agricultural revolution, called high farming; introduced by the repeal, or after the repeal, of the corn laws, and possible only in a country of great wealth, dense population, and limited surface.

The English do not revolutionize like their neighbors the French; but they revolutionize; they are always at it, in their quiet way, attempting only what is possible and useful, without the destruction of the past, ushering in a better future. M.

THE AMERICAN POMOLOGICAL SOCIETY.

SIXTH SESSION.

In conformity with a resolution passed at the last meeting of this National Association, the *Sixth Session* will be held in Corinthian Hall, in the city of Rochester, New York, commencing on WEDNESDAY, the twenty-fourth day of September next, at 10 o'clock, A. M., and will continue for several days.

Among the objects of this meeting are the following: To bring together the most distinguished Pomologists of our land, and by a free interchange of experience, to collect and diffuse such researches and discoveries as have been recently made in the science of Pomology—to hear the Reports of the various State Committees and other district associations—to revise and enlarge the Society's catalogue of Fruits—to assist in determining the synonymes by which the same fruit is known in America or Europe—to ascertain the relative value of varieties in different parts of our country—what are suitable for particular localities—what new sorts give promise of being worthy of dissemination—and, especially, what are adapted to general cultivation.

The remarkable and gratifying progress which has been attained, of late years, in this branch of rural industry, is, in no small degree, attributable to the establishment and salutary influences of Horticultural and Pomological Societies. It is, therefore, desirable that every State and territory of the Union should be represented in this convention, so that the advantages resulting from this meeting may be generally and widely diffused. Held, as it will be, at a convenient point between the Eastern States

and the Western, easily accessible from the South, and also from the Canadas, it is anticipated that the attendance will be larger than on any former occasion, and the beneficial results to the American farmer and gardener proportionably increased.

All Pomological, Horticultural, Agricultural and other kindred associations of the United States, and of the British Provinces, are requested to send such number of delegates as they may deem expedient; and nurserymen, and all other persons interested in the cultivation of fruit, are invited to be present, and to participate in the deliberations of the convention.

In order to increase as much as possible the utility of the occasion, and to facilitate business, members and delegates are requested to forward specimens of fruits grown in their respective districts, and esteemed worthy of notice; also, papers descriptive of their mode of cultivation—of diseases and insects injurious to vegetation—of remedies for the same, and also to communicate whatever may aid in promoting the objects of the meeting. Each contributor is requested to make out a complete list of his specimens, and present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as soon as practicable after its organization.

Packages of fruits and communications may be addressed as follows: "FOR THE AMERICAN POMOLOGICAL SOCIETY, care of W. A. REYNOLDS, Esq., Chairman Com. of Arrangements, Rochester, N. Y."

Delegations will please forward certificates of their appointment, either to the above, or to the undersigned at Boston.

Gentlemen desirous of becoming members of the Society, and of receiving its Transactions, may do so by remitting to the Treasurer, THOMAS P. JAMES, Esq., Philadelphia, Penn., the admission fee of two dollars, for *biennial*, or twenty dollars for *life* membership.

MARSHALL P. WILDER, *President*.

H. W. S. CLEVELAND, *Secretary*.

Boston, Mass., March 15, 1856.

For the New England Farmer.

PEAT MUCK AND CROPS.

MR. EDITOR:—I don't know when I have been so interested as in reading a recent report of the Massachusetts Legislative Agricultural Meeting, on manures. It is a subject second to none to the farmer. On the farm that I occupy, there is a swamp containing about five acres, from which we have for the last ten years drawn from fifty to eighty loads to the yard, and by way of experiment, small quantities have been put on different parts of the farm, in a raw state, always to little or no benefit, excepting in one case. We had about one acre of cold, stiff, clay land, the mould not being over one inch in depth, upon which we put thirty loads of muck right from the swamps; plowed in the Spring, harrowed and sowed to oats, and had a good crop. In the fall, (September I think,) I plowed, harrowed, and sowed one-half bushel of Timothy; mowed it last summer and got a fair crop of hay.

We get the most profit by putting it in the yard and in the trenches in the stable; and get as good corn where we manure with muck carted from the yard, as we do from any other manure. So it makes it a matter of fact with me, that the juices of the

yard and stable, which would otherwise be lost, are the best part of the manure.

Some time in 1854, I inquired by the way of the *Farmer* as to the way of using muck—the editor kindly answered me. I could not fully carry out his directions, except in one case, and that was in the mixture of lime, at the rate of one bushel dry slaked lime to the load; this I tried, and the result was that it doubled my crop of potatoes. It was put on at the rate of thirty loads to the acre. On the remaining part of the same piece, manured with yard manure, at the rate of twenty-five loads to the acre, did not get more than half as much crop as on the part manured with muck.

Thetford, Vt., 1856.

S. K. BERRY.

For the New England Farmer.

CIRCUMSTANCES ALTER CASES.

BY HENRY F. FRENCH.

An Agricultural Discussion among Legislators—Profound Views of one of them—Two Ways of learning Agriculture—A little learning is a dangerous thing—Use of Mathematics in Agriculture, illustrated—Science is simply the Observation of God, at Work—The Life Principle—Men of Education needed—Experiments Frustrated.

Three or four years ago there was a discussion one evening in the hall of the House of Representatives at Concord, New Hampshire, at a meeting called by the friends of agricultural progress, for the purpose of impressing the members of the General Court, if possible, with the idea that the State ought to do something in aid of the farming interest, by way of pecuniary assistance to the agricultural societies, or otherwise. One would suppose that this would be no difficult task, especially as the constitution of the State expressly provides that—"It shall be the duty of the legislators and magistrates to encourage private and public institutions, rewards and immunities for the promotion of agriculture," but as the lawyers say in their bills in chancery, "the contrary thereof is true." I well remember the argument of one highly respectable gentleman, who evidently considered it his duty to make a speech against these new notions about scientific agriculture. The fact is, said he, that there is no dependence to be put upon those men who talk about scientific agriculture and agricultural chemistry. They don't agree, among themselves, and if you undertake to follow their advice, you will find no two of them to advise alike. One of them will tell you to plow in all your manure green, and another to compost it all before it is applied; one will tell you that you must put the manure into the ground a foot deep, because the best part of it rises and so escapes, while another informs us that the manure sinks, and goes off into the ground, and so we had better leave it near the surface. One chemist tells us there is nothing so good as lime for our land, and another warns us not to mix lime with our manure heaps, because it will spoil the whole. And so our worthy legislator proceeded to show up the absurdity of these new light teachers of husbandry.

Now this is not a very unusual style of argument, and it is very hard to meet. The fact is, that the man was so far off from any appreciation of the truth, that nobody could go far enough back to get round him! There are two ways of learning agriculture, as there are of learning music. The one is by rote, the other by understanding its principles. A person may learn a particular tune, perhaps as well by the former as by the latter method, but this will not help him to sing or play a new sheet of music. And so in husbandry. A man may see his grandfather and father carry on the homestead, and by treading in their footsteps, may bring about results as satisfactory as theirs, on the same farm with the same crops. But place him on a new farm, or let him undertake to raise new crops on the homestead, with no knowledge of *principles*, and nobody can tell whether the product will be Yankee Doodle or Old Hundred.

There is truth in the poet's saying

"A little learning is a dangerous thing."

A man is much safer to be literally a know-nothing in agriculture, than he is when he has got a glimpse of two or three ideas, with no sufficient knowledge to guide him in their application. Many men have a strong propensity to mathematical reasoning—to work out their propositions by the single rule of three direct. Thus, if a half-ounce of guano to the hill, will add twenty bushels of corn to the acre to my crop, how much will a quarter of a pound to the hill add to it?

Now the corn and the arithmetic will not be likely to come out, exactly alike; indeed, the corn, probably, will never *come out*, at all.

The farmer, who tried *salt* as a manure for potatoes, by putting half a pint in a hill, was probably disgusted with scientific farming forever. Had he put the same quantity into his soup for dinner, he would have had a parallel case.

We, in New England, need education in the Principles of Agriculture, to do our work properly. On the new and fertile soil of the West, only brute force is requisite to produce a crop. Cut off the timber and burn it, or break up the prairie sod and put in the seed, and the crop will come. But, the skinning process has been finished here, and we can get from the earth only what we first give it, or induce the elements to render up to its use. The temper of our good mother Earth is worn out, and she will no longer deal with us on terms, which place "the reciprocity all on one side."

We can no longer have our music by turning the crank of a hand-organ, but we must learn skillfully to touch the keys, or we shall reap only discords. The philosopher in the story, who believed that all things came by chance, and sought to make for himself a wife by mixing all the elements which enter into the composition of a human body, and

putting them into a cask, which he diligently rotated daily, till the particles should happen to come into their proper relations to each other to produce the lovely object of his desire, never succeeded, that I have heard of, in finding the lady, by that process.

A farmer, who supposes that he will chance to hit on the laws that govern the principles of vegetable production and growth, by acting on some one scientific idea that he has fallen upon, in total ignorance of every other law of nature, has scarcely less absurdity to answer for than the philosopher in search of a wife. It is much to learn the bounds of knowledge, so as not to waste our efforts on things beyond human reach. The essential *Life Principle* is beyond the grasp of human knowledge. How the dead differ from the living, He alone knows who gave life. Philosopher and chemist are both at fault here. They may analyze the dead but not the living. The vast, the Heaven-wide difference between the living and the dead no man can define. And this is equally true of vegetable, as of animal nature. The grain of corn, or the blade of grass, which we carefully examine in the laboratory, is not that which receives our care in the field—which drew up its nourishment from the soil, selecting thence the honey from the poison—which absorbed from the dew and the rain and from the sunlight even, the elements of its being, which gave it form and color and distinctive qualities. *This* is a dead plant. *That* was a *living* creature, with a soul-like instinct, which directed the germ in the sod to strive upward for light, which governed it, in its growth, in choosing from the infinity around it, those elements suitable for this and no other living thing, which made it in the midst of various others, growing so diversely side by side with it, so unlike them all and yet so unerringly true to its own type, so exactly in form and essence, to its own species, scattered far and wide over the earth.

In this view, we are tempted to say, that agricultural science must rest only on experiment. Doubtless the carefully conducted experiments, with their well-observed results, by persons competent to observe and appreciate the means used, the conditions of soil, and climate and treatment, are the most reliable and satisfactory of our guides for the future. The difficulty, however, is in having experiments thus conducted, and the results noted and compared. The chemist may, and does, accurately analyze the soil. That is dead matter. It is the same in the laboratory and in the field. He can tell you whether one soil is like another, or how they differ. He can analyze the fertilizing agents, and give you their comparative richness, in certain elements admitted to be valuable. He could have told our friend in the General Court, which of the valuable properties of manures are likely to sink into the earth, and which to escape by evaporation in-

to the air, and what soil is most tenacious of these properties. Then we need men of education to note down and compare results when obtained.

Probably three-quarters of the experiments commenced each spring fail entirely from want of system, or knowledge, in some person on the farm. You plant some select dozen of potatoes, procured with great care and cost, and in your absence, your boy who does the chores digs them all for dinner, some day. You have a few hills of some new and valuable variety of corn, and tell your Irishman, recently imported, to cut the stalks; and before you know it, he cuts it all up at the roots, and the cows have had it for supper.

And, finally, when some experiment has been carefully watched through the whole season by yourself, personally, the crop is gathered by some enterprising "hired man" who wanted to do some surprising act of energy in your absence, and when you eagerly inquire of the results, he has them so thoroughly mixed up in his head, that he gives you the same valuable information that the woman did about the indigo; said she, "If you want to know whether it is good or not, just put a little piece in water, and if it is good, it will—either sink or swim, I declare I can't tell which!"

To illustrate the necessity of knowing enough to see both sides of a proposition, and to show how "circumstances alter cases," in farming as in everything else, I have noted several topics. Among them is the subject of the application of manures, and therein, of composting, the subject of deep plowing, and that of digging about fruit trees. On all these topics, there are different notions; arising mainly from the differences in soil and locality, which may be profitably examined with a view to reconciling or refuting them.

In a future number, having faith—though the snow lies deep around, and the glass is at zero—that seed time and harvest will not fail, I hope to discuss these matters with more minuteness.

For the New England Farmer.

MEASURE OF MILK.

MR. EDITOR:—In the *Farmer* for February 16, "—" gives a problem nearly as follows:—"My milkman has lately altered his measure from beer measure to wine measure, and his price from seven to six cents per quart. I wish you or some of your correspondents would inform me which gains by this change?"

As you did not answer it, I send you the result of my ciphering, to dispose of as you think best. In Greenleaf's Arithmetic I find that a gallon beer measure contains 282 cubic inches, and a gallon wine measure 231 cubic inches.

If I have reckoned right your correspondent has to pay nearly five per cent. more for his milk now, than he did before the milkman changed measures. Brookfield, Feb. 19. YEOMAN.

Register of the Weather in Mansfield, Mass., for January, 1856.

Barometer and Thermometer attached.			ASPECT OF THE WEATHER.	Out-door Ther. in shade.			Force of Wind.	Wind.
Sunrise.	1 P. M.	9 P. M.		Sunrise.	1 P. M.	9 P. M.		
29.55	58	80	1. Fair. Sky nearly clear.	4° 23° 4°			Light airs.	N. W.
29°	32°	81°						
29.90	87	76	2. Fine. P. M., some hazy. Evening, cloudy.	2 25 23			Do.	N.
29°	29°	83°						
29.41	20	25	3. Cloudy; little snow, 1 inch, and rain.	34 32 30			Do.	N.
28°	40°	40°						
29.62	75	91	4. Entirely clear.	12 19 0			Do.	N. W.
34°	33°	28°						
29.90	80	80	5. Cloudy; few flakes of snow.	8 12 9			Do.	N.
21°	20°	22°						
29.05	23	52	6. Cloudy, A. M.; fair, P. M.; driving snow storm last night—fell 20 inches.	10 21 0			Breezes.	N.
23°	23°	60°						
29.62	62	54	7. Fair; little hazy.	-3 28 21			Nearly calm.	N. W.
22°	37°	30°						
29.30	25		8. Part fair and part cloudy. $\frac{1}{2}$ inch snow.	26 32 4			Breezes.	S. W. and W.
36°	88°							
29.35	35	35	9. Entirely clear.	-10 1 -13			Light airs.	W. and N. W.
10°	19°	16°						
29.35	35	32	10. Clear.	9 10 7			Breezes.	S. W. and W.
14°	18°	24°						
29.53	55	70	11. Clear.	14 26 6			Do.	N. W.
30°	32°	32°						
29.80	79	71	12. Fair; P. M. hazy.	-12 23 19			Nearly calm.	N. W.
21°	29°	29°						
29.05	28.80	72	13. Cloudy; snow and rain; snow 5 inches.	32 38 32			Brisk gale.	E and N. E.
43°	43°	52°						
28.87	94	29.02	14. Cloudy morning; little snow. P. M. partly fair.	24 30 21			Light airs.	N. and N. W.
38°	38°	38°						
29.02	08	06	15. Fair; travelling bad.	14 26 14			Breeze.	N. W.
34°	50°	34°						
29.10	03		16. Fair. Evening hazy.	1 28 18			Light airs.	S. W.
31°	36°							
28.94	90	29.00	17. Mostly cloudy; little snow— $\frac{1}{4}$ inch.	22 32 28			Do.	S. W. to N.
36°	38°	40°						
29.15	20	23	18. Fair.	27 36 16			Do.	W. to N. W.
38°	44°	41°						
29.18	18	30	19. Fair; grows colder, evening.	7 40 7			Breeze.	W. to N.
32°	37°	31°						
29.36	22	10	20. Fair, some hazy.	8 19 12			Light breeze.	N.
26°	26°	30°						
29.09	08	08	21. Fair.	7 21 12			Light airs.	N.
32°	30°	30°						
29.15	16	23	22. Fair; most entirely clear.	0 20 10			Do.	N.
30°	28°	30°						
29.27	27	30	23. Entirely clear.	-4 28 12			Do.	N.
27°	32°	34°						
29.37	36	30	24. Fair. Evening some cloudy.	-7 30 21			Do.	S. W.
32°	36°	36°						
29.43	45	65	25. Entirely clear.	6 5 0			Brisk gale.	N. W.
32°	24°	25°						
29.63	57	57	26. Entirely clear.	0 22 12			Breeze.	N. W.
24°	38°	31°						
29.50	41	24	27. Morning fair, then clouds up.	-2 28 24			Nearly calm.	W.
22°	32°	36°						
29.00	28.94	29.15	28. Cloudy. A. M., little snow. P. M., fell 3 inches.	23 32 14			Breeze.	N. E.
36°	36°	30°						
29.30	29	24	29. Cloudy.	17 42 24			Nearly calm.	S. W.
34°	37°	40°						
29.10	08	10	30. Cloudy; $7\frac{1}{2}$ A. M., snow begins; at 9 A. M., ceases; fell $\frac{1}{2}$ inch.	24 29 12			Breeze.	S. W. and W.
40°	40°	34°						
29.28	30	37	31. Very clear.	8 21 5			Do.	W.
30°	32°	35°						
Mean for the month.....				9° 25 $\frac{1}{2}$ ° 12 $\frac{1}{2}$ °				

REMARKS.—The first column, under the head of barometer and thermometer attached, contains the first line for the barometer, and immediately under for the thermometer attached to the barometer; both attached to each day of the month. The first observation at sunrise, or a little before; the second at 1, P. M.; the third at 9, P. M. The column under the head of out-door thermometer in shade, is also taken for sunrise, 1, P. M., and 9, P. M.

Yours, &c.,

ISAAC STEARNS.

☞ The attention of the reader is particularly called to an article on "Small Matters worth Knowing," by Professor Nash, in another column.

EXTRACTS AND REPLIES.

WHAT AILS MY COW?

On page 107 of the monthly for March, I find the inquiry, "what ails my cow," unsatisfactorily answered. Having been myself a keeper of cows, and having often observed precisely the same signs or symptoms of disease, I am confident I have discovered the cause; and, as an act of humanity to the dumb animals, I wish to reveal the secret. At one end of my stable is my hen roost; those cows standing near it were the ones affected most; this circumstance suggested that it might be the effect of lice; which, on examination, I found invariably true. Many are the remedies for lice. Tobacco is

effectual; but although intelligent men will roll it as a sweet morsel under their tongues, it will make a *beast* sick, and sometimes produce death.

My remedy is to rub unguinum sparingly on the parts affected, and repeat once a week, for a few times, and the cure is effected.

W. N.
Pittsfield, 1856.

GUANO FOR CORN.

MR. EDITOR:—Can I expect a good crop of corn if I use guano alone? If so, how should it be applied? How much in a hill? I tried it on a very small scale last spring, putting a small handful in the hill, and mixing it thoroughly, but the corn was all killed. As I should like to use it on a somewhat larger scale, another year, I thought it best to ask information of one who was able to give it.

Taunton, Feb., 1856.

SUBSCRIBER

REMARKS.—There are nearly as many different results in the use of guano, as there are experiments. There is really no *certain* information to give you. We used it on two acres of corn, spread broadcast and harrowed, and got a good crop. Our neighbors used it and got nothing. The circumstances were not the same. Just so it is on grass crops. We find no *certainty* in its results. It is not so with barn manure, or meadow muck composts. Who ever knew them to fail? or that their application resulted in an entire loss? You must earn your knowledge experimentally—on a small scale, and with great care, and tell us by-and-by what it is.

Poudrette is a good manure, because it is manufactured from very active fertilizers—that is, if it is made well. Excellent potatoes have been raised with guano, and in large quantities; but as many have failed with it in this crop as have succeeded. These general remarks are the best we can do for you. The truth is, we *do not know* what guano will accomplish for any body.

BARN ITCH IN COWS.

MR. EDITOR:—In your paper of the 26th of January, one of your subscribers makes the inquiry, "What ails my cow?" I think, from his description of the cow, she has got what we Vermonters call the *barn-itch*. My remedy is, lard and sulphur, applied to the parts diseased. Rub it in thoroughly. It is a disease prevalent in these parts, but is easily checked by applying the above remedy. In my opinion, it does not injure their milk in the least, as it is a disease of the skin.

J. L.
North Springfield, Vt., 1856.

☞ Another correspondent, E. J. Bacon, Ware, Mass., also gives it the same name, and says he had seven cows afflicted with it; thinks it does not affect the milk. Remedy, rub on lamp oil.

CARROTS FOR HORSES—HOW SHALL I TREAT SANDY LAND.

MR. EDITOR:—I see a great deal in the agricultural papers about feeding carrots to horses, but not a word about washing or cleansing them from the adhering particles of soil—quite an important

item in the expense of preparation, without which, it seems to me, the horse's teeth will soon be worn out. (a.)

I wish to learn how to treat a piece of light, sandy, weak soil, so as, if possible, to realize something from it; stable or barnyard manure being out of the question. (b.)

Fairhaven, Vt., 1856.

W. BRIGGS.

REMARKS.—(a.) Many persons never wash roots of any sort, for horses or cattle—though it is an easy matter to do so. Take a half hogshead tub and fill it half full of water, throw in the roots, and let them remain two or three hours, or over night, stir them about one minute with a sled stake, or something like it; then with the six or eight tined fork, throw them into a box and cut them with a shovel. The same water will answer for use for several days. This may be done in the root cellar.

(b.) Use clay, and plenty of good peat muck, on your weak, sandy land. If very sterile, after applying one or both of these, sow buckwheat and plow it under two or three times, and then you have a basis to work upon which will last for years.

WHITEWASHING ROOFS.

MESSRS. EDITORS:—In the *Farmer* of 23d Feb. Mr. Orrin P. Allen, of Proctorsville, Vt., makes the inquiry whether whitewash would not be a good preservative for the roof of a building. In answer, I will tell him my first experiment. About twenty years ago, we built a barn, and for the want of better shingles, I used those made mostly of the sap wood of white pine; previous to laying of them, they were dipped into a large kettle of boiling hot white wash, well salted, till well soaked, and laid on to the roof after being dried. Now after nineteen or twenty years, those shingles are apparently sound and the roof tight; had they been applied without the antiseptic steep, they would probably have been rotten in five years, if they had shared the fate of those applied to some of my other buildings. The time that the shingles ought to continue in the white wash, must be decided by further experience.

Another advantage beside the preservation of shingles is the fire-proof tendency of the salt combined with the whitewash, which we all know is a damper to fire.

Wilmington, Feb., 28, 1856.

S. BROWN.

GUANO AND MUCK.

Would it be good economy for a farmer, who would get *pay* in return for the outlay, to purchase guano and mix with muck for the purpose of growing corn or other crops? and if so, how much guano should be mixed with a load of 30 bushels of muck, in order to put a shovel full to the hill.

Webster, Feb., 1856.

NOVICE.

REMARKS.—Apply at the rate of 300 pounds of guano to the acre, and if the land is of a sandy nature, as much fine peat muck as you can afford. Begin by making the experiment in a small way. There are so many circumstances, of which we know nothing, in such cases, that a mere opinion would be worth but little to you.

WINTER SQUASHES.

MR. EDITOR:—I would like to be informed of the best kind of winter squash; I mean a good kind, and one that *keeps* the best.

I raise a kind they call here the marrow squash, a very good kind, and I am well satisfied with the quality, but never have been able to keep it longer than into January.

E. G. CROWELL.

Canaan, Me., 1856.

REMARKS.—We have seen to-day, March 12, a fine marrow squash—to be kept long they must be placed in a dry place, above the freezing point, and where the temperature is somewhat even. The "Canada crook-neck" is a fine variety, and will keep a year.

RED CEDAR.

Can you give me information about the Red Cedar? Where can the seed be obtained? Will it bear transplanting?

C. W. S.

Wisconsin, 1856.

TO RAISE EARLY CUCUMBERS AND TOMATOES.

Place pieces of inverted turf just beneath the surface of the soil in a hot-bed, and on these plant the seed. As soon as the time for spring frost has passed, lift out carefully the pieces of turf with the growing plants, and place them in highly manured ground where they are to complete their growth. No check is received by this removal. If there appears afterwards any probability of a night frost, cover them with boxes, or other things most convenient. If the foregoing operations have been conducted with tolerable care, cucumbers may be gathered in eight or nine weeks from the seed, and tomatoes in fifteen or sixteen weeks. Do not, ordinarily, plant anything between the hills, as lettuce, radishes and cabbages; they will be sure to make the bed too thick and close before they have got their growth.

M. H. Y.

North Berwick, Me., 1856.

PAINTING ROOFS—MEADOW MUCK.

C. E. L., *Highgate, Vt.*—An article in the last number speaks of painting roofs. Several recent numbers of the *Farmer* give the information you desire about meadow muck. See a letter on white-washing roofs in this number.

CHARLES S. WEBSTER, *Kennebunk, Me.*—You can obtain the Japan potato of Mr. Wm. R. Prince, Flatbush, L. I., five for five dollars. Send to this office and we will furnish the report you inquire for. Mr. Webster adds:

"I would also add my mite in testimony of cutting feed for cattle. I have tried it for two winters, and I am satisfied that I can save one-fifth of the food, or I can keep five cattle on the same feed cut that would keep five without; and this is the result of taking the papers.

We have had a cold dry winter; the snow is near three feet deep on a level in the woods, it has not settled any yet; we had a heavy fall last night, the 2d; there has been no rain since December, and the springs and wells are very low.

March, 1856."

WASHING FRUIT TREES—CAN A COW DRAW WATER FOR HERSELF.

I would like to be informed if it is best to wash fruit trees with strong soap suds, and how soon it ought to be done, and when is the best time to set out strawberry vines? I would like to be informed if a cistern holding from eighty to one hundred barrels can be so rigged as that a cow, by stepping on the platform, can raise the water herself? If it can be done, I would like to see a plan in the *Farmer*, and the probable cost, without the cistern.

Cotuit Port, 1856.

D. CHILD.

REMARKS.—Wash fruit trees in April or May, with soap diluted to the thickness of good cream. We cannot answer the other question—who can?

HOW TO MAKE BUTTER COME.

A subscriber wants to know how to make butter come.

Answer.—Scald the milk when new by setting it on the stove, or in the stove oven; if the latter, may leave the oven doors open that the milk may not burn.

ERRATUM.—In the article, "Organic and Inorganic Matter," in the monthly *Farmer* for March, 30th line from top, read *inorganic* for *organic*.

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

IMPROVEMENT IN SOAP.—The wife of an American agriculturist has been experimenting in soaps, and finds that the addition of three-quarters of a pound of borax to a pound of soap, melted without boiling, makes a saving of one-half in the cost of soap, and of three-fourths the labor of washing, improves the whiteness of the fabrics, besides the usual caustic effect is thus removed, and the hands are left with a peculiar soft and silky feeling, leaving nothing more to be desired by the most ambitious washerwoman.

TO PRESERVE LARD SWEET.—Instead of putting it into large vessels, put it in stone crocks, or jars, of from one to four gallons each; when cooling or thickening, put in your salt, which will mix through the lard, instead of settling on the bottom of the crock. The next day take clean bits of cotton cloth, rather larger than the top of the vessel, and after putting it smoothly down, and pressing the edges snugly around so as to exclude all air, pack in a close layer of salt, then lay over another piece of cotton cloth, and turn over it a plate or a cover which will fit tightly; then tie over two thicknesses of paper, and set it in a cool, dry place. In this way I have kept lard perfectly sweet eighteen months. Crocks of butter should be kept in the same way.—*Cor. of Michigan Farmer.*

BEEF STEAKS.—The beets, after being washed carefully, may be baked either whole like sweet potatoes, or in slices, and then served up hot with butter, pepper, &c., to the taste. There is a delicious flavor in beets cooked in this way, which is lost when they are boiled. The best sorts for this purpose, are Bassano, Waite's dwarf black, and turnip blood beet.—*Ohio Cultivator.*



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. VIII.

BOSTON, MAY, 1856.

NO. 5.

JOEL NOURSE, PROPRIETOR,
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

IRRIGATION.



ANY writers on agriculture have been unanimous in urging the importance of irrigation, especially on soils which are naturally dry, and susceptible of being affected injuriously by drought; and in many situations, it is certainly to be regarded as one of the most useful and important operations which come within the province of the farmer. Water, or, at least, moisture, is one essential condition of vegetation, for water, either directly or by its decomposition, contributes to the nutrition and sustenance of every cultivated plant, as well as to the vegetable world in general. This fact, and the importance of irrigation as a branch of agriculture, was well understood by the ancients. Homer, in the *Iliad*, says, in allusion to the subject:

—"The peasant with his spade, a rill
Conducts from some pure fountain, through his grove
Or garden, clearing the obstructed course."

And in the *Odyssey*, when he describes the wonderful beauty of the gardens of Alcinoüs

—"Amid
The lovely scene, two fountains welling forth,
One visits into every part diffused,
The garden round."

And Virgil, in his *Georgics*, expresses himself in very much the same manner, while most of the ancient writers, historians, as well as the children of Parnassus, have recorded innumerable instances of its adoption in oriental countries, as a means of vegetable enrichment, and sustenance to crops.

In China, it has been practised from the most remote epoch of which the historical records of the country furnish any account. In some parts of Asia, particularly at Mysore, irrigation, as a branch of agriculture, is under the express auspices and control of government. In the Milanese territory, it is probably adopted to a greater extent than in any region, and ditches, tunnels and canals are everywhere seen running in every possible direction through lands, the unsurpassed beauty and luxuriance of which attest most conclusively, the advantages resulting from their efforts. These life-giving veins were opened centuries ago, and the continuance of an adequate supply of water in them for all the numerous and multiplied purposes of agriculture, is still, more than formerly, an object of popular solicitude. So highly, indeed, are the advantages resulting from this universal diffusion of water estimated, that the canals and viaducts embraced in this system of general irrigation, are placed under the jurisdiction of the government, the same as are the highways.

The wonderful fertility of Egypt, or that part of it rather, which is known by the appellation of the "Delta," bordering upon the river Nile, and periodically submerged by the exudation of its waters, is proverbial. "To this river," remarks a celebrated traveller, "Egypt is indebted for its fertility and happiness; for as it seldom rains in the inland parts of the country, and the soil is naturally dry, if the lands were not annually watered by its overflowing, Egypt would be one of the most barren regions in the world."

Water, in almost all cases, contains fertilizing particles which are exceedingly beneficial to vegetation. When water has stood for a considerable length of time on the surface of the soil, it is found to be pregnant with nutritive matters, which it has imbibed during its quiescence, and which are in a condition to act beneficially, and with great energy, when applied to plants or crops of any kind. The water conveyed by rills and streams, is never without fertilizing powers. When applied by irrigation

it does not only supply a necessary and indispensable condition of vegetable life in furnishing a solvent for the inert and soluble matters already contained in the soil, but it supplies the actual food of vegetables in a state of solution, and consequently ready for their immediate appropriation and support.

There is no substance that enters into the organization of the living system of plants, that can be taken up by the roots, as food, except in a state of solution. Hence the powerful effects produced by copious and frequent irrigation in seasons of excessive drought, and when the natural supplies of the soil are so far exhausted as to cause it to parch, and the soluble humus contained in it, to become dry and incapable of yielding its juices to the roots it is designed by nature to supply. In many places, the natural facilities for introducing a system of general irrigation, which would subserve the wants and supply the necessities of a whole community, as in the cases above mentioned, are not to be found; yet there are a great many farms at least, that might be effectually and permanently irrigated, at very small expense. It is already done, in some instances in our knowledge, with the happiest results.

That irrigation and thorough draining must go together, we are aware, and to establish a complete system would be a work of considerable time and expense on a large farm. But the subject is one of importance, and ought to be familiar with the thought of every farmer, so that in his annual operations he may have the object in view, and that they may have a tendency to the beginning of the work.

It seems to us that the character of our summer climate is settled—it is to be dry; so dry, that without artificial means, either of deep trenching and high manuring, or by irrigation, many of our crops must annually suffer. It is the part of wisdom, then, for the cultivator to have in view some method of averting an evil which shall annually reduce his profits and blast his hopes.

BIOGRAPHIES.—Some weeks since we stated that it would be a part of our plan hereafter to publish brief biographical notices of men distinguished for their ability and influence in matters pertaining to agriculture. We have already given a notice of the late **FREDERIC HOWES, Esq.**, of Salem, and are now furnished with a memoir of the late **Professor ZADOCK THOMPSON**, of Vermont, the State Naturalist at the time of his death, and long eminent for the interest he manifested in every thing that promoted the prosperity and tended to adorn rural life. We shall soon find a place for this sketch.

PEPPERGRASS AMONG THE CUCUMBERS.—A gentleman from the western part of the State informs us that a plant or two of peppergrass in a cucumber hill, will keep off all yellow bugs.

For the New England Farmer.

CARE OF COLTS.

MR. EDITOR:—Knowing the inattention usually shown to questions asked through the public prints, I take the liberty of being one (perhaps of the five hundred) to give answers from practical experience, to the questions asked in your February number of the *Monthly Farmer* in regard to raising colts; and will here say that it is much the custom of breeders generally to care very little for colts, and until of late years there was no stock raised, to which so little care was given. I will make answer in the same order as the questions were published in the February number.

1. Keep colts in good order, not too fat, with a variety or change of food. Oats, cut feed or roots, and two or three quarts of grain, not more, per day.

2. Wean colts before taking up for winter, if strong and lively; if not, afterwards, but according to the time of being foaled.

3. The colt should be weaned according to the strength of it and its dam, but generally at about the age of six months.

4. If the colt was a late one, by all means. It would not materially injure the mare, if she could be kept in good flesh and spirits; but if a large and strong colt, it would reduce the strength of the mare. It is not advisable to let a colt draw on the mare longer than can be helped.

I will here remark that there is no particular need of cleaning or rubbing, but feed and water, regularly, and keep them warm in winter, and by this, and kind treatment push them forward for the first two years. But above all things to begin with,—breed from the best blood to be had, as they are more profitable, and the expense is just as much to raise a good one that will bring a \$150 at a year old, perhaps \$300, as one that never will bring much.

If these answers meet your ideas, use them as you will; if not, why they may be sent with the rest of the rejected ones to the fire.

Respectfully, your obedient servant,
Feb., 1856.

M. A. C.

For the New England Farmer.

SPROUTED GRAIN.

MR. EDITOR:—In the February number of your interesting and valuable paper, I find an inquiry from Mr. W. Bugbee, respecting the sowing of grown or sprouted wheat. During the last few years I have usually sown grown grain and obtained fair crops. The last season my grain was wheat and rye, was badly grown, so much so that I render it wholly unfit for use as to making the t I sowed both kinds of it last fall, which was sown; the well and looked as well as usual wheat, but the rye came. It would be prudent, when grain is much sprouted, to sow a few quarts of rye, or rye to the acre. But I will give our method of testing seeds, both of grain and cotton, which is, to fill a tumbler nearly full of water, lay upon the water in the tumbler cotton batting, having previously sown the seeds to be tested into the cotton; set them upon the forty-eight hours or less the seeds will be found being vitality, if they have any in them. This is a sure test and no mistake.

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Agawam, March 4, 1856. J. E. FERRE.

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Dr. FISHER introduced Mr. COOLEY, of Conway, as the chairman of the meeting, who, on taking the chair, stated that he was unexpectedly called upon to officiate, and was consequently unprepared to make any remarks upon the topic for consideration, and he would therefore leave the conducting of the meeting to others.

Mr. BROWN, of Concord, editor of the *New England Farmer*, said he thought we did not yet fully understand the value of root crops. In England they are highly valued, because more can be obtained from the same surface for the support of cattle, by their cultivation, than by the cultivation of grain, and because they are valuable in producing beef and mutton, which are in great demand there. They are a favorite diet for sheep. With us, there is a prejudice against the cultivation of roots, perhaps on account of the amount of labor required. They need a deep soil, and most farmers have not got into the habit of cultivating deeply. Not more than one farmer in a hundred, in Massachusetts, had made any fair experiments in trenching. There are sandy loams, and in some cases, clay loams, that are well suited to raising roots. If well cultivated, from a hundred to twelve hundred bushels may be obtained from an acre. He had raised parsnips at the rate of twelve hundred bushels to the acre. The mangel-wurzel is very easily raised, grows large, and is always an excellent root for stock. It grows much out of the ground, and therefore, seems to require a different kind of cultivation from some other roots. In cultivation it is necessary to have the ground well plowed, and then two furrows are turned together, and on the top of the ridge thus formed, the seed is sown; the ridge being first flattened a little. The labor of harvesting them is less than that of beets, or ruta-bagas. Cattle are very fond of them, and they are highly nutritious. He had not succeeded so well with beets as with other roots; he had no doubt they could be raised at a handsome profit.

Round turnips may be cultivated easily by sowing them upon the land which is designed for grass, the ground being first plowed in July, and thoroughly prepared for grass, and the turnip seed being sown, along with the grass seed. From three hun-

dred to seven hundred bushels per acre may be obtained without any extra labor except that of gathering them. This method impoverishes the soil very little. He thought, in the eastern section of the State, the potato must be thrown out of the question as a root for stock feed.

The advantages of feeding roots to stock were next referred to. He had been told that milk could not be made for market unless the cows were fed on meal of some kind; but he had found it too expensive to feed wholly with meal and hay. Having determined to try roots, after an experiment of feeding six cows with meal one season, he fed the same six cows, with the same kind of hay, and with roots the next season. The roots were of various kinds, the mangel-wurzel, beet, ruta-baga, round turnip, parsnip and carrot, and these were mixed in feeding. After being milked in the morning, each cow was fed with half a bushel of mixed roots, which they ate greedily. There was no complaint of the turnip taste in the milk, and his milk-man returned him cash for twice as many cans of milk as he did the year before when they were fed on grain. That experiment had satisfied him that more milk could be obtained by the use of roots than by feeding a certain amount of meal a day, say three quarts a day, as he fed his cows the first winter. The milk from roots is perhaps of a poorer quality, but milk sellers rarely have any qualms of conscience about that, if they get a greatly increased quantity. Mr. Webster was a careful observer, and although he never did a day's work on a farm, perhaps, after he left the old homestead, he watched the operations of others in farming narrowly; and there are many better farmers who never did a day's work than some who have been at the plow-tail all their lives, because they have been close and accurate observers. They would be able to go on to a farm, and direct its operations well at once. So Mr. Webster rarely talked about farming, any where, without bringing in the root crops. He saw that their cultivation would be of great benefit to New England farmers. In closing, Mr. BROWN expressed the opinion that more could be made from a given number of acres by the cultivation of roots, than by the cultivation of grasses and grains.

Mr. WILLIAMS, of Hadley, was next called upon. The soil in his town, he remarked, was, in every part of it, susceptible of cultivation. But root crops are not generally raised there. The soil is so good, and grain is so easily raised, that roots are neglected. They were probably too negligent in that respect. He was, however, of opinion that they might be raised with great advantage, not only in his vicinity, but throughout the State.

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it does not only supply a necessary and indispensable condition of vegetable life in furnishing a solvent for the inert and soluble matters already contained in the soil, but it supplies the actual food of vegetables in a state of solution, and consequently ready for their immediate appropriation and support.

There is no substance that enters into the organization of the living system of plants, that can be taken up by the roots, as food, except in a state of solution. Hence the powerful effects produced by copious and frequent irrigation in seasons of excessive drought, and when the natural supplies of the soil are so far exhausted as to cause it to parch, and the soluble humus contained in it, to become dry and incapable of yielding its juices to the roots it is designed by nature to supply. In many places, the natural facilities for introducing a system of general irrigation, which would subserve the wants and supply the necessities of a whole community, as in the cases above mentioned, are not to be found; yet there are a great many farms at least, that might be effectually and permanently irrigated, at very small expense. It is already done, in some instances in our knowledge, with the happiest results.

That irrigation and thorough draining must go together, we are aware, and to establish a complete system would be a work of considerable time and expense on a large farm. But the subject is one of importance, and ought to be familiar with the thought of every farmer, so that in his annual operations he may have the object in view, and that they may have a tendency to the beginning of the work.

It seems to us that the character of our summer climate is settled—it is to be dry; so dry, that without artificial means, either of deep trenching and high manuring, or by irrigation, many of our crops must annually suffer. It is the part of wisdom, then, for the cultivator to have in view some method of averting an evil which shall annually reduce his profits and blast his hopes.

BIOGRAPHIES.—Some weeks since we stated that it would be a part of our plan hereafter to publish brief biographical notices of men distinguished for their ability and influence in matters pertaining to agriculture. We have already given a notice of the late FREDERIC HOWES, Esq., of Salem, and are now furnished with a memoir of the late Professor ZADOCK THOMPSON, of Vermont, the State Naturalist at the time of his death, and long eminent for the interest he manifested in every thing that promoted the prosperity and tended to adorn rural life. We shall soon find a place for this sketch.

PEPPERGRASS AMONG THE CUCUMBERS.—A gentleman from the western part of the State informs us that a plant or two of peppergrass in a cucumber hill, will keep off all yellow bugs.

For the New England Farmer.

CARE OF COLTS.

MR. EDITOR:—Knowing the inattention usually shown to questions asked through the public prints, I take the liberty of being one (perhaps of the five hundred) to give answers from practical experience, to the questions asked in your February number of the *Monthly Farmer* in regard to raising colts; and will here say that it is much the custom of breeders generally to care very little for colts, and until of late years there was no stock raised, to which so little care was given. I will make answer in the same order as the questions were published in the February number.

1. Keep colts in good order, not too fat, with a variety or change of food. Oats, cut feed or roots, and two or three quarts of grain, not more, per day.

2. Wean colts before taking up for winter, if strong and lively; if not, afterwards, but according to the time of being foaled.

3. The colt should be weaned according to the strength of it and its dam, but generally at about the age of six months.

4. If the colt was a late one, by all means. It would not materially injure the mare, if she could be kept in good flesh and spirits; but if a large and strong colt, it would reduce the strength of the mare. It is not advisable to let a colt draw on the mare longer than can be helped.

I will here remark that there is no particular need of cleaning or rubbing, but feed and water, regularly, and keep them warm in winter, and by this, and kind treatment push them forward for the first two years. But above all things to begin with,—breed from the best blood to be had, as they are more profitable, and the expense is just as much to raise a good one that will bring a \$150 at a year old, perhaps \$300, as one that never will bring much.

If these answers meet your ideas, use them as you will; if not, why they may be sent with the rest of the rejected ones to the fire.

Respectfully, your obedient servant,

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M. A. C.

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The chairman stated that his cultivation of roots had been principally confined to potatoes. He had had very little rot among them, and invariably had

a good crop. He spread his manure broad cast, and plowed it in, to the depth of eight inches. He put ashes in the hill sometimes, and found them beneficial. Guano put in the hill, had caused his potatoes to rot. His potatoes cost about sixteen cents per bushel, which was less than the expense of raising a bushel of carrots.

Mr. BROWN stated the result of feeding round turnips to a cow for fattening, to which he fed thirty bushels, with hay, and made her very fat indeed, so that she was sought by the butchers at a high price. In preparing the land for turnips, he pulverized it well, and levelled with brush harrow.—The seed was sowed in drills marked out with a machine prepared by himself. The labor of sowing in that way was very little, and they were weeded principally with a wheel hoe. He had recently seen a plan of a cultivator which weeded both sides of a row at once, but he had not seen it tried.

Mr. J. L. LOVERING, of Vermont, was next introduced, who said that though root crops were perhaps less cultivated in Vermont than in Mass., there were few farmers who do not raise more or less. They raise many sheep, and it is becoming an axiom that no farmer can have a good flock of merino sheep who does not feed them with roots as often as twice in a week. The green food seems to prevent some of the diseases to which they are subject when not thus fed. Ruta-bagas are raised principally for feeding stock. He had not succeeded well with getting his carrots to germinate, as for some cause or other the seed failed; but when they came up well he had no difficulty in obtaining a large crop. He had raised at the rate of twelve hundred bushels to the acre, and he thought them better than ruta-bagas. Potatoes are still fed to stock a good deal in Vermont. Many are raised, and if they will not bring in market about twenty-five cents a bushel they are considered worth that to feed out. Some farmers cook ruta-bagas before feeding, and one gentleman had recently fattened a pair of old cattle with ruta-bagas cooked, and made them very fat. He thought ruta-bagas worth twice as much when cooked as when fed raw. Turnips are fed to sheep, and are thought to be better for them than carrots or other roots, producing a better quality of milk for the lambs.

Gen. TOWNE, of Worcester county, had a very high opinion of the importance of roots for feeding stock; the sugar beet, for beef and for stock generally, was decidedly the best root that grows, in his opinion. One great advantage in raising them is that the tops are very good indeed for young hogs. He said he always meant to have some pigs about the first of September, so that about the first of October the milk of the mother would hardly be sufficient for them. Then he had a yard of sugar beets near, and he would make a little hole in the fence so that the pigs might understand they were

getting into mischief by getting among the beets, and they will eat off all the leaves, which are as good as green corn for them, and the eating of them off does not injure the crop at all. He thought the leaves more than paid for the labor of raising those which were near the hog-pen.

He thought Mr. BOWN had slandered potatoes. They are decidedly better for milk cows than carrots. For hogs he always boiled them. A little meal, say a quart to a half a bushel of potatoes, he admitted, would do a great deal of good, if fed regularly. He thought turnips injured milk. Carrots he had found to be good for horses when they were not worked; they will fatten well upon them. At the present time, when corn is worth \$1.25 a bushel and hay more than a cent a pound, he was willing to pay thirty-three cents a bushel for potatoes to feed to his stock.

Mr. BROWN said if he had slandered the "murphies," of which he was not aware, he would "acknowledge the corn," if Mr. TOWNE would state his method of cultivating sugar beets.

Mr. TOWNE replied that he prepared the ground for them precisely as Mr. BROWN did for the mangel-wurzel. He took pains to put but a single seed in a place, dropping them in little holes made by a stick, about five inches apart. He was quite particular about sowing them because it would save the labor of thinning them out. He put them in about two inches deep and covered with a hoe. The rows were about two feet apart. He did not soak the seed before sowing.

Mr. HOWARD, of Boston, thought the idea that turnips make poor milk was carried too far. He knew a farmer who fed his cows on Swedish turnips and chopped hay, and his customers complained when the turnips were omitted. He knew another man who has kept seventy head of cattle and fed several thousand bushels of turnips, and made excellent butter. At the exhibition of the New York State Agricultural Society, he received the highest premium for butter, his cows having been fed wholly on Swedish turnips and hay. The comparative value of different vegetables is important; but he believed the potatoes to be far superior to any other root for feeding to cattle. One winter he fed two cows one week with potatoes, the next on parsnips, and the next on sugar beets, giving them also constantly two quarts of meal per day. They were fed in this way through the winter, and the result was that the cows did best in those weeks when fed on potatoes, and poorest when fed on sugar beets. He thought the Massachusetts Board of Agriculture could not do a better thing than to direct attention to experiments as to the relative value of different kinds of root crops as feed for cattle.

Mr. WILLIAMS, of Hadley, spoke of the difficulty in raising roots on the Connecticut river valley, for

the reason that the soil becomes weedy from cultivation, and consequently there is more labor required to cultivate roots than corn. He had experimented some in the cultivation of potatoes. The disease has affected them considerably sometimes. When planted on a dry, alluvial soil, without any manure placed in the hill, they decayed much less. He had found great advantage in taking the seed from a distance. On one occasion he produced some Carter potatoes from a hill town twenty miles distant from his own farm. They were quite small, and he hesitated about planting them. But he obtained a very fine crop of excellent potatoes from that seed, while from large ones of the same kind raised on his own farm, he did not obtain more than two-thirds as many from the same quantity of land.

Mr. A. B. MAYNARD, of Onondaga county, New York, was next introduced. He said he was a native of Conway and went West when two years of age, when Western New York was a new country. But now they had reached an advanced position in agriculture in New York. He then spoke of the manner of raising the mangle-wurzel, beet and carrot there. They plow in the Spring so as to have the weeds killed, and plow two or three times also in the Summer. The manner of preparing the ridges for sowing and the after cultivation was similar to that stated by Mr. BROWN. He raised a mangle-wurzel that weighed ten pounds when washed and with the top off, and a carrot that weighed six pounds. He had tried fattening cattle on roots and hay, keeping them shut up all the time, and found that they fattened faster when thus treated than when allowed to go out to drink. He preferred the white sugar beet to any other root for feeding stock. In his opinion, they improved the land by shading it. In reply to inquiries, he said that he had not found the sugar beet to exhaust the land. He had cultivated them many years on the same field and found no depreciation in the crop.

To this it was suggested by Mr. EMERSON, of Boston, that the soil of that country was once the bottom of a lake, and very fertile, and of course could not be taken as a standard for others.

Mr. LOVERING spoke with reference to the necessity for changing potatoes, in answer to the remarks of Mr. WILLIAMS, stating that he had cultivated one variety which he knew had grown on his farm for thirty-five years, and he had no doubt he obtained as good ones from them last year as were ever raised anywhere.

Mr. DODGE, of Sutton, spoke of the difficulty from weeds among root crops, and said that he had killed the weed seed in the manure by putting salt into the manure.

Mr. BUCKMINSTER advocated the planting of small potatoes, of about the size of hens' eggs, or even small-

er, if sound. If they are equally good, there is an advantage in using them—because more plants can be obtained for a bushel. He knew a gentleman by the name of Blanchard, of Wilmington, who had tried planting small potatoes six years, and the last year the crop was quite as good as that of any previous year. He was glad that the cultivation of a variety of root crops was gaining favor. Carrots are worth \$12 per ton in Essex County. One gentleman in Worcester County raised one hundred and forty tons, which he sold for from \$10 to \$12 a ton. In this connection, he spoke of the value of sweet apples, which he thought very beneficial for stock.

Gen. TOWNE said he had cultivated small potatoes six years and he considered them decidedly better than large ones. He would also feed sour apples to stock, if sweet ones were not to be had.

Dr. FISHER, of Fitchburg, stated that a gentleman in his town had planted very small potatoes between twenty and thirty years, and he found them as good as large ones.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 8.

SOUTHERN COUNTIES—KENT AND SUSSEX.

If now my reader will take a map of England, and travel over it with me, by counties, the journey, even if it be tedious, will confirm the remarks I have made, in the seven former numbers, on the system of English rural economy.

England proper is divided into forty counties of different sizes. They are commonly divided into five groups—southern, eastern, midland, western and northern. We will commence our survey with the seven southern counties, the poorest of the five groups, to wit, Kent, Sussex, Surrey, Hampshire, Dorset, Devonshire, Cornwall.

Landing at Dover, we enter the county of Kent. This county has a character peculiar to itself, *first*, in its crops—half the hops produced in the kingdom grow in Kent, all kinds of seeds are produced for the supply of the London seedsman—kitchen gardens, on a large scale, abound near the capital—*second*, in the extent of its farms—many are not of more than ten or fifteen acres, few exceed two hundred acres—*third*, in its laws, by which lands are divided, on death of the father, equally among his sons, and if there be no sons, among the daughters. This county belongs to the great clay basin of London, and is not of easy cultivation. It adheres to its old methods of tillage, and the system of Arthur Young has not been adopted here. The wet lands by the banks of the rivers form almost the only natural meadows, except the celebrated Romney marsh, one of the richest pastures in the kingdom, situated on the coast, and covering an area of about 40,000 acres. There the fine race of sheep, known as the New Kent, takes its rise, which combines with a high quality of mutton, a wool superior to that of other English breeds. With the exception of this valuable breed of sheep, there is nothing remarkable in the stock of Kent. The crops are not what they ought to be, although im-

proved methods of tillage are spreading, and drainage is extending, and appears destined to alter the character of the clay lands. The population of Kent is 600,000, upon an area of a million acres, but not all dependent on agriculture—villas abound and commerce flourishes in the numerous ports of its coast. Wages are about fifty cents a day, and the rent of land is from five to six dollars per acre.

Sussex lies next to Kent, and contains about the same number of acres, but only 330,000 inhabitants. What is called the Weald occupies about half its surface, and is an extremely clayey tract of land, formerly a forest, which weald signifies. This tract, called Weald, is the most backward part of England, in point of agriculture. It is divided into farms of from 50 to 200 acres, rented at from a dollar and a quarter to three dollars and a half an acre; and generally speaking, the tenants are men without capital, and as ignorant as they are poor. Wherever rents are high in England farmers are, generally speaking, better off than where they are low. Improved implements are little known in the Weald; farmers thrash with the flail and employ oxen for tillage. These animals are strong and large, and a contrast to the other national breeds; and the cows, as is the case of all working races, are bad milkers. Our cows in New England would be better milkers, if not of the race of our working oxen.

The Duke of Richmond has his seat, Goodwood, in Sussex, and pays much attention to agriculture. He was an earnest opponent of the repeal of the corn laws.

The Weald, probably, cannot remain in the state it now is. Sir Robert Peel long ago remarked that it needed a large infusion of capital. But this is not easily found—it does not exist on the spot. The proprietors are not wealthy, nor the tenants. If the capital comes from abroad, it will come with a change, in the mode of farming and of property. If the large system of farming is introduced—and this is the favorite system now in England—what is to become of that population of small tenant farmers, who have gone on increasing under the present system? They will be forced to emigrate. Such is the decree of modern fate in England; and a harder fate it is.

Several successful attempts demonstrate what the land of Sussex may become, in the hands of men of ability and capital. Among these is the farm of Hove, near Brighton, tenanted by Mr. Rigden, containing about 740 acres, and let for a rent of \$7750, including taxes and insurance. The annual work expenses are \$15,000, divided as follows; wages \$8500; tradesmen's accounts \$1750; cost of manure and seeds \$4750; total annual expenses, including rent, \$30 the acre. Besides this, Mr. Rigden expended, on entering the farm, \$60,000 to bring it into condition. This capital, according to the recognized rule in such cases in England, ought to give a return of ten per cent. Mr. Rigden, in order to be recompensed, ought to obtain a gross return of \$28,000. This is a specimen of large English farming, in all its magnificence.

The following is the rotation of crops: forty acres in permanent pasture; of the remaining seven hundred, half is in grain, and the other half in forage crops. The 350 acres of grain are thus divided: wheat, 250; barley 40; oats 60. Of the 350 in forage crops, 20 are in beet-roots; 12 turnips; 42 swedes; 6 carrots; 50 potatoes; 10 cabbages; and

the remainder in clover, rye-grass, lucerne, sainfoin and vetches. A greater breadth of land is here given to wheat and a less to turnips than is usual in England; but this is owing to the nature of the soil, which is more suitable for wheat than barley, and for roots, than green crops.

The stock Mr. R. keeps is as follows: 350 Southdowns; 20 tups; 21 milch cows; 28 farm horses and a small number of pigs. He does not fatten sheep, but sells, annually, about 250 lambs of six months, and about 100 ewes, which he replaces from his younger stock. This branch of farming brings him about \$2,500. On account of the high reputation of his stock, his lambs fetch \$500 apiece, and the ewes and rams more than double that sum.

His milch cows give an average of nearly twelve quarts of milk per day, which is sold in Brighton, making the return for each cow about \$175 a year. Taking into account the sale of calves and fattened cows, this department brings in some \$3500 to \$4000. He sells, annually, \$12,000 worth of wheat and barley, and \$10,000 worth of straw, hay and potatoes. Of his twenty-eight farm horses, seven are almost constantly employed in carrying produce to market and bringing back manure.

Mr. Rigden's example has thus far had few imitators—indeed few have \$60,000 to invest in a farm, especially in a district like Sussex.

Next the Weald, the county of Sussex presents one of the most primitive and prosperous districts of England—what are called the Southdowns. The soil of these hills is poor and arid, and resists all attempts at cultivation. This very sterility has proved their fortune. From time immemorial, they have been covered with flocks of sheep, that feed upon the short rapid grass, which is manured by their excretions. We have already spoken of the Southdown sheep—the most esteemed breed of England. The chief amusement of the wealthier classes of the English who flock to Brighton, in the season, is riding over these immense downs, where there is nothing to interfere with them—no hills, and very little heath or shrubs, but one uninterrupted green carpet of fine close grass. This land, thus neglected and left to itself, a desolate looking country, inhabited only by sheep, is the field of a skilful and lucrative kind of farming.

Thus far our journey has been over Kent and Sussex. M.

For the New England Farmer.

ONE WORD FROM SALLY ABOUT THE BUTTER.

MR. EDITOR:—I have made butter for twenty years, and worn out a good constitution in churning and working and salting butter. I bought, (when my husband was from home,) one of Fyler's Butter Working Churns, made by Henry Holmes, of Grafton, Vermont. The man said it would work and salt the butter, and I want the world to know that pedlar told the truth, and that there is one good patent churn. I think it makes more butter, and I know it saves one-half the work, and it does the work so easy and quick, that I am troubled to keep Mr. — from churning. Now, sisters, I want you should assert woman's rights enough to pay five or six dollars for one of these churns the first chance you have, and if you get scolded a little by the lords of creation, never mind, if it only causes them to churn and work the butter.

SALLY.
Keene, N. H., Feb. 8, 1856.

ILL-USING HORSES.

Mr. Gavin, V. S., a contributor to the *London Veterinarian*, offers the following remarks, on ill-using horses, which are adapted to our meridian as well as that of London.

"Allow me to draw the attention of your readers to a subject, which, although at first sight may appear a very unimportant one, yet, on a second view, seems to contain largely the tendency to mischief and misfortune; and the veterinary profession, I think, may safely be looked to, as likely to exercise a considerable influence in obviating the evil. I allude to the practice so common at horse-fairs, dealers' yards, &c., of rattling a stick and hat together, with the avowed object of frightening horses. It seems very questionable whether it be judicious, on the contrary, to teach a horse to be afraid at all; but, to associate in the animal's intelligence, terror on the one hand, and an article which may accidentally at any time create terror, on the other, appears very thoughtless. I have known many a case of tumble and run away, from just so simple a thing as a bat coming clattering to the ground. Not many horses will stand it. But what else can we look for? The last time they heard the sound, it, in all probability, was in connection with whips and sticks, fright, &c.

I have frequently heard it very gravely recommended by very knowing horsemen, to under-feed horses that are difficult to break. I suppose, on the presumption that hunger will tame a lion. I doubt if mere *hunger* ever tamed any thing; starvation might, but even then, the tameness, apparently, is more the result of the subsequent kindness than the previous cruelty. From a trial of my own, I infer the practice to be a bad one. That "an angry man is a hungry one," is proverbially true, this being one of the laws of organization; hence the soundness of British philosophy, in celebrating everything with a dinner; and I can see how an organization, disqualified to perform well the alimentary functions, should be attended, as often as it is in horses, with a fretful, bad temper, *vide* what we call weakly animals.

Horses, however, on the whole, get pretty severely punished for being made this way. Others of them, from careless breaking, riding, or disease, get a habit of stumbling, to which the punishing is applied very often as a remedy; and, although I never saw it do any good myself, and perhaps nobody else ever did either, yet I suppose it is impossible to allow such aggravated disobedience to go unpunished.

Horses frequently come under the rod for shying, as if they had no right to be frightened without leave. It seems hardly fair, but opinions differ. He may be going past a lime quarry, for instance; there is a noise, he gets uneasy, and then punished, to get more uneasy still; the next time he sees the same object, and a further punishment only settles him more firmly in the belief, that there is some unfortunate connection between a quarry or animal leap and the whip and spur. I have every faith in the efficacy of kindness, and none whatever in cruelty. This, however, is at the consideration of your readers, for their own individual adoption as a principle of action in the treatment of animals.

I am your very obliged servant,

WILLIAM GAVIN."

For the New England Farmer.

PRICE OF MILK, &c.

MR. EDITOR:—In a late number of the *Farmer* a correspondent inquires concerning the difference in the measure by which milk has been sold, and the legal one, and was glad to hear that one more had dropped that old measure and commenced with the new.

But, sir, the object I have in view at this time is not to answer the question of your correspondent, but to call the attention of the community to the price paid for milk.

I find in my intercourse with the community that they entertain the grossest errors concerning the worth of the article and the cost of its production. They don't seem to think that a pound of good milk is worth more to one-half of the human family than a pound of beefsteak; that it will make more bone, and give more strength; yet the milk costs only 6 cents per pound, and the steak from 10 to 20 cents. Then, again, the cost of production has advanced nearly 50 per cent., and instead of being sold for 6 cents per quart, as it now is, should be sold from 10 to 12 cents, and my word for it, whoever lives to see five years more, will have to pay that for it.

People believe, many of them, that if a man raises milk he is on the high-road to fortune, and nothing but great mismanagement can prevent it. Now to such, I ask their candid consideration to the following facts:

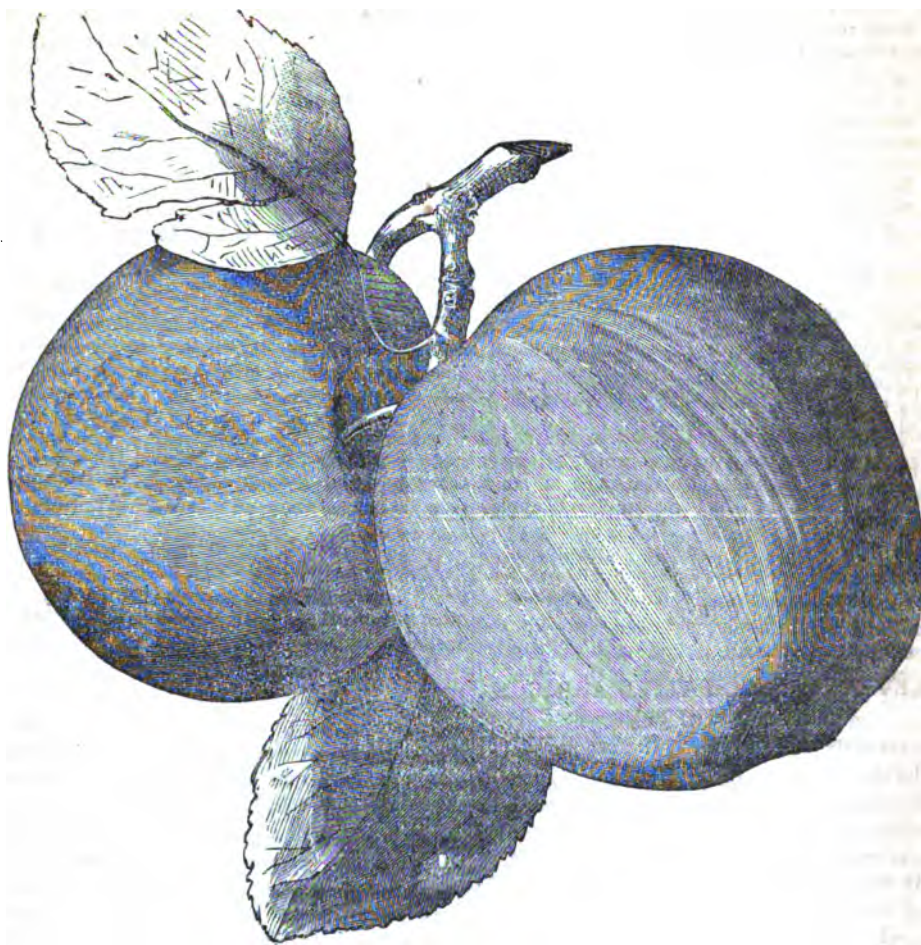
First, good milking cows within fifty miles of Boston will average \$50 apiece. *Second*, their keeping twenty-two weeks in summer, including cow corn, pumpkins, apples and hay, is worth \$10. *Third*, the interest and depreciation upon each one cannot be less than 7 per cent, \$3.50. *Fourth*, the buildings necessary to keep her in, and for the storing of hay, grain or roots, cannot be less than \$5.00. *Fifth*, keeping 30 weeks at hay and grain. Dr. Dana, in his *Muck Manual*, see page 189, states that an average cow of fifty, kept in Lowell, consumed 167 lbs. of hay, with 87 lbs. of potatoes, per week, and the hay at that rate is worth \$50.10, while the grain necessary for them, 2 quarts oil meal with 2 quarts cob meal or shorts, is worth 75 cents per week more, making \$22.50. Now we will put it together, and see what it amounts to:

Keeping in summer, 22 weeks.....	\$10.00
Interest, &c.....	3.50
Buildings.....	5.00
Hay.....	50.10
Grain.....	22.50

\$91.10

Thus you see that it amounts to ninety-one dollars and over, and I have made no allowance for accidents of death, abortions, &c., which is quite an item with milk raisers. I have offset the washing of cans and care of stock with the manure. I do not believe there is a man in Massachusetts that keeps more than one cow, who has raised milk the past year, that has averaged three-fourths that sum for his milk at his door; and I assert distinctly that whoever has raised milk the past season, and sold it to the retailer, has lost by the operation from \$10 to \$40 per cow. I have sold milk at my door for the last five years, have a good set of cows, and I have never averaged \$50 per cow, and the milk raised within fifty miles of Boston will not, I think, average \$40 per cow. So much for getting rich by raising milk.

MIDDLESEX.



MORRISON'S RED APPLE.

At our particular request, Mr. Morrison furnished us, last fall, with two specimens of his incomparable Red Apple, from which we have had made the accompanying engraving. But no engraving can do the fruit justice—it cannot show the bright, deep red, nor the exquisite blending of colors in the shade, nor the minute russet spots, mere pin dots, which cover it in the sun. It is, indeed, a great accession to our list of first rate apples. We have eaten it now three years, and can speak with confidence. Mr. Morrison deserves the thanks of the community for bringing it into notice. He says:

FRIEND BROWN:—As I have sold most of my Reds, I thought I would give you a little further history respecting them. I have sold four bushels to one man in Boston, for nine dollars. I have a few on hand, in order to test their quality for keeping. Dr. PLYMPTON, of Cambridge, who gave me the scions, says he was informed by the owner

of the tree, that the apple would keep into summer. My impression is that they will keep as well, or better than the Baldwin. The windfalls were considered, by good judges who ate of them last October, to be a *first rate* apple. This has been the general opinion of all who have seen and tasted the apple, to the present time, except Mr. Downing, of New York. He says the New York Pippin, and some others, are better. From what knowledge I have of them, I think there is no winter apple in the vicinity, that will command a higher price. I shall not, however, as fruit growers have been so much imposed upon, recommend the apple to be extensively cultivated, until I have further tested their qualities. Your candid judgment, sir, is solicited respecting the fruit, as you know the quality as well, or better than I do.

The original tree, supposed to be a seedling, stands on the Fisher farm, in Medfield. The trees are good growers, and very productive. I calculate to use all the scions I can get this season, and re-

graft trees which have proved to be almost worthless.

If farmers would study and practice that economy in all the various branches of farming which is their privilege to do, they need not go hungry, or with an empty purse. It costs no more to propagate a tree which is productive, and bears fruit that will command the highest price, than it does to propagate a barren, worthless one. I have a few trees that were almost worthless when I purchased my farm, but by using a little theory and much practice, well combined, they now pay me the interest of two or three hundred dollars a tree, annually.

Now, friend Brown, I confidently believe that I have received more net income from the labor expended in the management of my fruit trees, than I have from all other sources of farming put together, although part of my theory which has produced such a result, has been considered bad by some of your correspondents.

Give us that economy and practice which has made many a poor man rich, and which brings in the most dollars from the least amount of labor. I am propagating thirty or forty varieties of apples. Some of them are seedlings. If any should prove worthy of a place in the records of good fruit, I shall cheerfully contribute to friends who are fond of the same.

N. P. MORRISON.

Somerville, March 24, 1856.

ELEVENTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY H. E. ROCKWELL.

The *eleventh* meeting of the *Legislative Agricultural Society* was held in the Hall of the House on Tuesday evening, as usual. The subject of discussion, as previously announced, was "*Neat Cattle*."

Mr. W. J. BUCKMINSTER, of Boston, junior Editor of the *Ploughman*, was invited to act as chairman, who said the number of varieties of neat cattle most common in New England were the Natives, Devons, Durhams, Alderneys, Herefords, and some others. He went on to specify some of the distinctive characteristics of these varieties. The Devons are small boned, rather medium sized, color good, skin yellow, disposition remarkably gentle, whether as bulls or as oxen. The oxen, which are half bloods of course, in this country, are good for work, docile, quick enough, and generally large enough for most purposes of farmers in this vicinity. They are good for beef. He then spoke of the milking qualities of the cows of this breed, and represented them as very good. In order to show their relative value in this particular he read a statement which has once been published, of the amount of butter made from a cow, owned by Thomas Motley, of Jamaica Plain. This cow, Flora, was of the Ayrshire stock, and was from four to five years of age when the milking for the year commenced. During the year 511 pounds and 12 ounces of butter were made from her milk. During the last three months of the year, it took "almost exactly" five quarts of

milk to make a pound of butter. The cow, Bloomfield, a North Devon cow, owned by Mr. Colman, in England, produced 21 pounds of butter in one week. He then referred to a statement made before a Lyceum in Barnstable county, by Mr. James Howes, of Dennis, who kept 16 cattle last year, comprising Devons, natives, and half breeds. He says it takes six quarts of milk of the Devons to make a pound of butter, and eight quarts of the milk of the Native cows for a pound. He does not state what quantity is required of the milk of the half breeds.

It has been stated in the *Massachusetts Ploughman*, that four quarts of milk of Devon cows made a pound of butter. It was done in the month of October, when the feed was very good, from two young cows that gave but three quarts of milk each per day. The amount per week would not, therefore, be remarkable. No statement was ever made that one pound of butter was made from four quarts of milk during the year. In a report made to a country society, a gentleman went out of his way to throw doubt on the statement, that a pound of butter was made from four pounds of butter. Another cow, owned by Mr. Reed, of Tewksbury, (a Jersey cow,) is said to have made a pound of butter from four quarts of milk.

Mr. ASA G. SHELDON, of Wilmington, said he would not endeavor to exalt one variety of cattle above another. He admitted that beef cattle had been improved by imported cattle, but he did not believe dairy stock had been improved. He never knew a heifer from a good native cow, and an imported bull, so good as the mother. He did not believe extra feeding was a benefit to breeding stock for the dairy. He was satisfied that there were 200 bulls, highly fed, in this State, that ought to have been slaughtered last fall. Bulls ought not to be kept till they are over two years old. He thought that in case of small farmers who could not well afford to keep much stock, heifers should be bred to work. He wanted to have premiums given for the best broke pair of heifers. He had seen heifers worked to good advantage by saving the keeping of oxen, and they were not injured for milk cows. He had known one farmer who had spent \$4000 in keeping bulls that were of no profit to him, and ought to have been killed to give place to cows. He did not believe the imported cattle had been of any essential benefit to the country, on the whole.

Dr. HARTWELL, of Southbridge, thought there were fewer objections to the Devon cattle than others. The objection in his vicinity was that they were too small for beef. Oxen should yield 1200 pounds neat weight for beef. He had seen in New York a cross of Devon and Durham which improved the cattle in size, but in other respects they had not been tested. The Devon cows, he considered good,

but could not say they were extraordinary. He had raised a heifer from a native cow and Devon bull that was better as a milker than the mother. He thought it desirable to increase the size of the Devons, and if that could be done, farmers might rest satisfied. This could probably be done better by crossing with good native cattle than with Durhams. He had been led to suppose that the Durhams would deteriorate in size in this country, and on that account he would prefer a half blood to a full blood imported animal.

Mr. WILLIAM BUCKMINSTER, senior Editor of the *Ploughman*, said that the best cow he ever had was a native cow and he made from her $14\frac{1}{2}$ pounds of butter in a week. She weighed about 1100 pounds. He had a pair of oxen, half Devon, which he fattened last fall, which weighed 3300 pounds alive. They were fattened about two months, principally on carrots, with half a peck of cob meal part of the time.

Mr. SHELDON said that he did not believe that a good or bad disposition was confined to any particular breed of cattle. A cow having a hazel eye will have a good disposition, and one with a black or white eye will have a bad disposition. He thanked his friend, Mr. BUCKMINSTER, for confessing that his best cow was a native.

Mr. BUCKMINSTER.—I meant to say that she was the best not only as to the quantity of milk but its quality for butter. But he raised nine calves from that cow, not one of which was good for anything for milk.

Mr. SHELDON.—Did not you take her to an imported bull?

Mr. BUCKMINSTER.—No sir, but to a common bull.

Mr. DODGE, of Sutton, spoke of the importance of trying to obtain a distinctive race of cattle of our own. He believed it would be better to work bulls, even though they are kept for breeders of stock. He had a pair, one of which is ten years old, and he intended to work him with another, this season.

Mr. SHELDON suggested to him as a matter of advice as to breaking them to work, that it would be a good plan when they are first yoked, to put two yokes on them at a time, which would make it impossible for them to turn the yoke.

Mr. DODGE said that he had kept a good cow till she is now seventeen years old, but he had never obtained a calf equal to the mother, for milk.

General SALEM TOWNE was called on to speak of the bull, Holderness, which was kept by Mr. Parsons, of Carlton. He testified to the great excellence of that bull, and said that the stock in his vicinity had been greatly improved by the introduction of that bull into the country. He said he saw six pairs of cattle, down on the Penobscot River when he was on a visit there, and from their appearance he judged them to be Holderness cattle,

though he did not know that there were any of that breed in the vicinity. After examining them, he was satisfied they were Holderness cattle, and told the owner of them that he was sure they were. "No," said he, "they were raised here in this neighborhood." "But what bull are they from?" "They are from the Towne bull," said he. That reminded him that he had sold several years before, a Holderness bull to a gentleman in Maine. He went to see the bull and found it was the same animal that he once owned.

Mr. HOWARD, of Boston, said he had in his possession the history of the bull Holderness. He was obtained in England, and was from a breed as much entitled to be called Durham as any thing. After the owner got him to this country he called him "Holderness," his former name being *Fortunatus*. He was sold to a man in Connecticut, and after being kept there some time, he was sold to a man in New York, and he died in a distillery. His qualities corresponded to those of the short-horned breed, in respect to the comparative coarseness of the flesh. Cows of that stock give a large quantity of milk, which makes a great quantity of cheese, but is not good for butter. Farmers should not judge breeds by simple specimens. They should examine many animals of all breeds.

Mr. W. BUCKMINSTER said that he considered it important to keep bulls till they are large, in order to keep up the size of stock. He had one which was eight years old last year, and he was as useful as a breeder as ever before. He said he had six Devon cows, whose milk was so nearly alike that it could not be distinguished, and this is of a quality which will produce a pound of butter from four quarts of milk, in the month of October.

Mr. R. S. FAY, of Lynn, was highly pleased with many of the remarks of Mr. SHELDON as to the superiority of native cattle. For beef, work and milk, there is no breed that is equal to our native stock in all these particulars, as they are found in Mass., and perhaps in Maine and N. Hampshire. But in some respects, he thought that these might be improved by crossing them with foreign stocks. To cross with Devons, Alderneys and others may be profitable if it is done with judgment. With reference to the preservation of the good qualities of a good cow, he said it was found, by a long course of experiments in Switzerland, that the way to accomplish the result was through the bull calves from the good cow and not by the heifers. A bull from a cow that is a good milker, is almost sure to perpetuate in his progeny the good qualities of the mother. That principle is an important one, and it is in harmony with statements made by gentlemen this evening, and it is considered as fully settled in Switzerland. The size of cattle may be increased without doubt by the introduction of foreign breeds, and it would be well to introduce them

from countries whose climate and soil corresponds to our own as nearly as possible.

Mr. EMERSON, of Boston, did not think large cattle desirable, but he preferred smaller ones as being more hardy and more easily kept.

Adjourned to next Tuesday evening, when the subject will be "*Horses and Farm Stock.*" Mr. HOWARD, of the *Cultivator*, will give an address on the first branch of the subject.

For the New England Farmer.

WORTHLESS GRASS.

MR. EDITOR:—In the *New England Farmer* for February, is a communication from R. B. H., in which is noticed a species of worthless grass, that has taken possession of much of the pasture land in the vicinity of Mount Monadnock, in New Hampshire, to the exclusion of other grasses, and is a serious evil. He mentions that the same difficulty is experienced in Massachusetts, especially in portions of Franklin, Hampshire, and Worcester counties.

In this county, Hampshire, there are thousands of acres of rough, hill-side land, and many acres more, smooth and level, with a light soil, that produce little grass, except a species that is nearly valueless. This mean grass was not uncommon in some towns thirty years ago, and has been gradually extending. It is the *Danthonia spicata* of the botanists, and in some books is called wild oats. The product is small, and of little value as grass or hay. In the spring, the brown leaves are all curled. In this town, the heads or panicles are disclosed between the 10th and 20th of June, and are soon after in flower. I suppose this to be the same kind of grass as that about Monadnock, noticed by R. B. H.

According to my observation, the *Danthonia* does not commonly take possession of the land, until the soil is exhausted, and has become too poor to bear anything more valuable. If this be so, nothing will remove the evil but enriching the land. Many of these hill-side pastures cannot be cultivated; where land covered with *Danthonia* has been plowed, and sowed or planted, without manure, it has generally produced a light crop that hardly paid for the labor, and has not been improved. There may be some exceptions.

Our farmers have no manure to spare for these lean pastures, and they are not likely to become more productive than they now are. Many grazing farmers do not keep more than one-third or one-half as many domestic animals as they did thirty or forty years ago. Thousands of farmers in Massachusetts could not live from their farms, if they did not sell wood and timber. The forests are fast disappearing in every direction.

S. J.

Northampton, Feb., 1856.

FARMERS' GIRLS.—The beautiful piece of original poetry communicated by "P. A. P.," from *Little Compton, R. I.*, was written for the N. Y. *Tribune* by HELEN M. LADD, and may be found on page 259, of the *Monthly Farmer*, for 1854.

NEW BOOKS.

THE CRANBERRY.—C. M. SAXTON & Co., N. Y., have published a beautiful little work of 120 pages, entitled "*A Complete Manual for the Cultivation of the Cranberry, with a description of the best varieties.*" By B. EASTWOOD. It is illustrated by a very tasteful title-page and several engravings of the varieties of the cranberry, of sod and cutting planting, and the diseases of the vine. The book is printed on large, elegant type and fine paper, and would really be an ornament to the parlor table. Price 60 cts. For sale by F. S. SAXTON, 81 Washington Street, in Boston, and by the publishers, in New York.

THE AMERICAN GRAPE GROWER'S GUIDE.—This is another of SAXTON & Co.'s useful and elegant works, by WILLIAM CHORLTON, author of "*The Cold Grapery,*" &c. It is illustrated with numerous engravings, and gives plain directions on "Houses and Conveniences, Artificial Heat and Apparatus, Borders or Prepared Beds, Planting and Management the first year, Management for the second year, and Permanent Treatment, the Forcing House, Pot Culture, Retarding House, List of Varieties, Pruning and Training, Propagation and Raising of New Kinds, Diseases, Insects, and how to destroy them, and the Vineyard and Out-Door Culture." Here you have the whole story by one who knows *what to tell and how to tell it.* Price 50 cts. For sale as above.

THE STRAWBERRY CULTURE.—A Complete Manual for the Cultivation of the Strawberry; with a description of the best varieties. Also, notices of the Raspberry, Blackberry, Cranberry, Currant, Gooseberry and Grape; with directions for their cultivation, and the selection of the best varieties. Third Edition Revised. By R. G. PARDEE. With an Appendix, containing the Experiments of some of the most successful cultivators in the country. This book is handsomely illustrated, and printed in the same beautiful style as that on the Cranberry. The above-named books are handsomely bound, so that they are as attractive outside as they are in. The price of each is low, and the information—flowing as it does from such reliable sources—of so much importance, that every person who intends to cultivate any of the plants treated of, ought to possess a copy. Everybody wants a grape vine, those who have land and those who have not. We expect soon to see them growing in the sitting-room, brought from the border through the window, trailed in graceful draperies about the room, and loaded with delicious and fragrant fruit. Are there any doubters? Let them read these books.

DAVY'S DEVON HERD BOOK.—American Edition, Edited by SANFORD HOWARD, Esq., Editor of the Boston *Cultivator*. This book ought to have been noticed months ago, but got laid away with other

books, and was forgotten. If those interested in the Devon race of cattle—and who is not—desire to see their portraits in perfection, and learn the pedigree of the most distinguished animals of this breed, let him refer to the Devon Herd Book. We know of no better hands into which the task could have fallen to prepare an American edition, than those of Mr. Howard.

For the New England Farmer.

EXPERIMENTS WITH SUPERPHOSPHATE OF LIME.

MR. EDITOR:—Having made a trial for the first time, during the past season, of DeBurg's Superphosphate of Lime, I send you the results, hoping they may be found useful to those engaged in agriculture.

The first was 150 pounds sowed the 21st of April on 60 square rods of natural mowing. The land was of good quality, but much exhausted by long cropping, situated on a side hill, with a clay subsoil. By the 1st of June the effects were visible at a considerable distance, and many persons visited the spot to observe the change it produced. In the middle of the lot my hired man, when he sowed the phosphate, had marked out the initials of a name, by putting on a much greater quantity of the fertilizer; those initials could be plainly read, and the grass upon them was probably three-fold greater than where only the average quantity was sown. This fact is important only as showing that the increase of crop was in proportion to the increased quantity applied. The clover, on the whole sixty rods, came up much thicker than upon the adjoining land, and at haying time it produced 33 per cent. more than where the phosphate was not applied. But this was not the least part of the experiment, for the second crop was still more remarkable than the first. It was fed down in the fall, and therefore could not be accurately measured, but no one who saw it doubted that there was an increase of at least 100 per cent. in the second crop. Nothing could well be more gratifying than the results of this experiment. It showed most conclusively the wonderful power of this fertilizer on grass land of the description named. I feel entirely confident that the first crop of grass next year on the same land will be much greater than it was last season.

I tried the same article on corn land. It was a dry knoll of poor exhausted pasture land, plowed in the fall, and in the spring 20 loads of stable manure spread and plowed in. The seed was the King Philip corn. Where the phosphate was applied in the hill at the rate of 400 pounds to the acre, the crop was doubled exactly, over that where nothing was put in the hill. The result on corn-fodder, though not so striking, was very satisfactory, the increase being about 50 per cent.

I tried the same on potatoes. Those called the Jenny Lind were increased about 25 per cent. Other kinds nearly as much.

By my advice several of the farmers in my neighborhood have made a trial of DeBurg's phosphate, and I do not know a single case in which it was not highly successful; and I am of opinion that there will be five times as much used in this town next season. All seem to be satisfied that they have

found a fertilizer that can be depended upon, that will pay, and pay well.

The advantages of the phosphate are that it can be easily obtained, conveniently transported and readily applied. To manure a field at a considerable distance, or on a high hill, with barn manure, is a formidable affair, requires a strong team, and a great deal of hard work. To apply enough of the phosphate to produce equal results is a very small matter. It enables farmers to extend their planting beyond the extent of their ordinary manures. It is particularly convenient for small cultivators, who often have some land, but no manure. To such the phosphate is the very desideratum. It is applied as easily as ashes, and is so effective as to answer every purpose.

Should the quality of the article be kept up, I feel quite sure it will be rapidly introduced into use. The only fears I have, arise from the apprehension that it may be adulterated, and thus rendered less effective and satisfactory. I do not know but the superphosphate prepared by other manufacturers may be equally good, but DeBurg's is the kind which I have used, and of that alone can I speak.

I hope that others will give their experience in the use of it, whether favorable or otherwise, so that the farmers may have as much light as possible on the subject.

AMASA WALKER.

North Brookfield, January, 1856.

For the New England Farmer.

BREAD, OATS AND CARROTS.

MR. EDITOR:—In the *New England Farmer*, monthly, for January, I notice two communications upon subjects of much interest,—“The most nutritious bread,” and “The relative value of oats and carrots.” Will you, or your correspondent, who is evidently quite familiar with the subject, oblige the readers of the *N. E. Farmer* by explaining why corn meal, containing two per cent. more gluten than fine wheat flour, will not make an adhesive dough? I had supposed corn meal to be deficient in gluten, partly because Dr. Pereira has said so, but the good Dr. may have been mistaken. A thousand pounds of fine wheat flour is said to contain two hundred and ten pounds, and the same weight of wheat meal three hundred and fifty-four pounds of tissue-forming materials. I do not quite understand the method of “ciphering out” a difference of more than fourteen per cent. Does the gluten, starch, fat, &c., differ in kind as well as quantity? Does one hundred pounds of fine wheat flour contain more or less nutritious matter than the same weight of oat or corn meal?

Is it true that the “potato-eating Irish” have “fair round bellies?” Mike Fagan declares it to be a “mistake entirely.” Mike is an honest fellow and has seen the Irish—he speaks for Tipperary, and avers that not a potato-eating laborer with a big belly can be found in the whole country.

Boston, Jan. 16, 1856.

W. H. H.

THE FARMERS' TOOLS.—On every farm there should be a good tool-house, or some place in the barn or shed, particularly appropriated to that use, for the shelter and security of the farming implements. The cost of a small building for the purpose, where the price of lumber is moderate, is

trivial, contrasted with its utility, and would be useful for other purposes when not required for the protection of tools. Many of our farmers are singularly remiss in the matter of protecting their agricultural implements. Carts, sleds, wheels, plows, harrows, spades, shovels, rakes, wheelbarrows, &c., are costly articles, and should by no means be exposed to the wearing effects of the atmosphere during those seasons when they are not in use.

For the New England Farmer.

METEOROLOGY, AS APPLIED TO CULTURE.

MR. EDITOR:—It was long ago said, that "snow was the poor man's manure;"—this being so, the prospect is, that his grounds will be liberally fertilized the coming season. Never have I known so continuous and substantial a coating of snow as has been for two months last past—say since the beginning of January. From all quarters, I learn that the depth has varied from *two to three feet*—so that it is fair to estimate the average depth, at least, *thirty inches*. It has been solid and impenetrable to an unusual degree. Directly opposite the window of my morning room, it was blown into a drift, *four feet deep*, on Sabbath morning, Jan. 5th, and has so remained ever since, not settling more than nine inches. I mention this to show the little influence of the sun upon the drifts during the winter.

The same philosophy that prompts Lt. Maury to note the variations of temperature, in different parts of the country, should prompt the cultivators of fields and gardens to note the quantity and position of snow upon their ground. I remember the finest peaches I saw the last autumn were exhibited at the Rockingham Fair at Exeter, and were said to have grown in one of the shore towns, in the eastern part of New Hampshire, Kensington or Hampton, I believe. On inquiry why they should have grown so perfectly there, it was said the limbs that bore them were covered for months with a drift of snow. Here there was a fertilizing or protecting influence exerted by the snow drift, worthy of note—such a one as secured the first premium for the specimen, of the most delicious of fruits—the thoroughly ripened peach—even on the verge of perpetual frost.

My purpose is not so much to give a philosophical explanation of how these phenomena operate on culture—as to induce you, Mr. Editor, to gather in from your friends and correspondents, in different sections, such facts as have come to their observation and knowledge; and to enter them for record in your useful journal, so that those who come after us may understand for a certainty what were the peculiarities of 1856. Pardon the suggestion, that well observed and recorded facts are the *only* reliable basis of knowledge in culture—however otherwise it may be in political management, *know-nothingism* may succeed in this for a time—but not in the culture of the field and garden. In these, he that knows most, will as certainly succeed best.

I have often heard the remark—"this winter seems like the olden time"—but when you come to pin the speaker down to the particular time referred to, there is not one in a hundred that can give you any reliable information whatever. Essex.

Feb. 29, 1856.

ORGANIC AND INORGANIC.

An organized body is one having organs to secure the purpose of its being. An animal has arteries, veins, nerves, and glands, a heart, lungs, stomach, &c.,—organs having functions in the economy of life. A plant has sap-vessels, secreting organs, leaves, buds and flowers. Crystals of the metals and minerals have their parts arranged by a law as definite and inflexible as the bodies themselves,—a kind of organization. A gathering of citizens becomes an organized body by the choice of moderator and clerk. A Legislature is organized by appointing speaker and clerk. These officers are organs by which the design of assembling is to be accomplished. But the terms organic and inorganic, as technically used in agriculture, have nothing to do with the object, design or arrangement of parts, but refer simply to the element or elements of which the body is composed. The terms, thus used, may be convenient, and are easily understood. If we burn a body, those portions which become gases and fly off we call organic; those to which the fire gives no wings, we call inorganic. If we take a piece of hickory, for example, and burn, oxygen, carbon and hydrogen will fly off, and silix, magnesia, potash, &c., will remain. If you burn a cabbage stump, nitrogen will be added to the winged products by burning. If you burn a fresh bone, oxygen, hydrogen, nitrogen and carbon will fly off, and lime, phosphorous, iron, &c., will remain. The wood, the cabbage and the bone are organized bodies, composed of organic and inorganic substances, and, so far as we know, the inorganic potash and lime are as essential to organization as the oxygen and hydrogen. The fact that when you destroy the organization by fire, one part flies away, certainly proves nothing on this point. The inorganic are frequently called mineral elements.

Were we to apply scientific accuracy to the terms organic and inorganic, we should find them, in their best agricultural use, very indefinite and faulty. All would call a piece of chalk inorganic, and yet if you burn or heat it, almost half of it flies off in this same oxygen and carbon, and the remainder is lime; and even this lime, when subjected to a higher heat, is shown to be, in part, a metal called calcium, in part this same winged oxygen. Inorganic water is composed wholly of the winged spirits, oxygen and hydrogen. So that chemistry soon brings us to elements, and of these, one is just as much organic, for ought we can see, as another. But in the agricultural use of the terms, if you burn an organized body, those substances which pass off are called organic, those which remain in the form of ashes, inorganic.—*Culturist and Gazette, Pittsfield.*

A REVOLUTIONARY INCIDENT.

The second volume of Irving's life of Washington has just been published. From it we cull the following anecdote. At the time Gen. Washington had his head-quarters in Cambridge:

"A large party of Virginia riflemen, who had recently arrived in camp, were strolling about Cambridge, and viewing the collegiate buildings, now turned into barracks. Their half-Indian equipments and fringed and ruffled hunting garbs provoked the merriment of some troops from Marblehead, chiefly fishermen and sailors, who thought nothing equal to the round jacket and trowsers. A bantering ensued between them. There was snow upon

the ground, and snowballs began to fly when jokes were wanting. The parties waxed warm with the contest. They closed and came to blows; both sides were reinforced, and in a little while at least a thousand were at fisticuffs, and there was a tumult in the camp worthy of the days of Homer. 'At this juncture,' writes our informant, 'Washington made his appearance, whether by accident or design I never knew. I saw none of his aids with him; his black servant was just behind him mounted. He threw the bridle of his own horse into his servant's hands, sprang from his seat, rushed into the thickest of the melee, seized two tall, brawny riflemen by the throat, keeping them at arm's length, talking to and shaking them.'

As they were from his own province, he may have felt peculiarly responsible for their good conduct; they were engaged, too, in one of those sectional brawls which were his especial abhorrence; his reprimand must, therefore, have been a vehement one. He was commanding in his serene moments, but irresistible in his bursts of indignation. On the present occasion, we are told, his appearance and strong handed rebuke put an instant end to the tumult. The combatants dispersed in all directions, and in less than three minutes none remained on the ground but the two he had colared."

For the New England Farmer.

THE STRIPED SQUIRREL.

MR. EDITOR:—In the *New England Farmer* for February, I notice a short communication upon the highly important, somewhat ancient and very perplexing question, "when the striped squirrel digs his hole, what does he do with the dirt which is displaced?"

That communication proposes one theory and refutes another. Now, I am moved to take my pen, not with the hope of casting any light upon a point so recondite, but to tell a story, which will illustrate another matter. I am willing, frankly to admit, that I have remained ignorant of the true answer to the above question; among all my researches in natural history, that discovery I have never made. Many a smart run after the provoking little creature have I had in my youth, terminated by his sudden disappearance in a small round hole, which seemed to have opened for his safety by magic.—No dirt about the mouth of his retreat indicated the agency of his paws; some underground power, I used to fancy, took pity on his feebleness, commiserated the fate which surely awaited him, if overtaken by a school-boy, and opened the earth beneath his feet at the critical moment when the club or stone was about to descend upon his head. I have procured water from a neighboring spring or brook, and carrying it in my hat, have poured it steadily down his hole, till he was forced by the flood to come to the surface, and have another run for life. This process demonstrated to my mind, that he had but one mode of communication with the upper world; but it determined nothing respecting the great question how he could dig his hole and leave no dirt behind him. And I was wont to return from such a chase with very much the same feelings, which, at a later period of my life, I experienced, after climbing to the top of the great Pyramid in Egypt, and exploring its inner chambers, I looked around me for evidence of the

enginery by which such a work was accomplished, and could not find a chip to indicate the existence of a workman.

But I will tell my story. I dare say it is familiar to many of your readers, but it will bear reading twice. It runs thus:

In those days of darkness when the bar-room of the village tavern was the only rallying place for wits and loafers, when lyceums and farmers' clubs had not been invented, and when the temperance reformation had not yet invaded the right of men to assemble peaceably, drink riotously, and part quarrelsomely, in those days of old, there was, in a certain village inn, a circle of neighbors, met for the purpose of having what is called "a good time." In order to afford a sufficient excuse for the expense and consequences of pretty frequent libations, they agreed that each one in turn should ask a question; this question was to go round the circle; if any one could not answer it, he should *treat the company*; if al. were at fault, the question should return to its originator; if he could not answer it, he was to treat the company.

After the sport had become animated, one of the circle, who was a wag in his way, proposed the question,—“When the striped squirrel digs a hole, what does he do with the dirt?” As you may suppose, no one could solve this knotty point. They all turned to the wag, and demanded an answer, feeling sure that he would have to pay the forfeit. When he saw their eagerness, he put on an air of superior knowledge, and coolly gave this answer: “Why, the squirrel when he digs his hole, leaves the dirt at the other end.” Instantly and unanimously they shouted out, “but how does he get there?” “How does he get there?” “Ah!” said the wag, seeing them all in his trap, “that is a question of *your own asking*.”

This is said to be the origin of that saying, so convenient, when one is hard pushed by a perplexing interrogatory.

Groton, March, 1856.

For the New England Farmer.

ASHES AND MUCK.

MR. EDITOR:—I have a piece of upland I wish to enrich by applying a mixture of ashes and muck from an adjoining swamp. I should say that the timber in and around this swamp was mostly hard wood, and the muck when dry is of a reddish brown. Should you think this to be a valuable kind of muck for fertilizing purposes?

Would August and September be a suitable time to cart out this muck and mix it with the ashes at the same time?

I would like to have you, or some of your correspondents, give a few simple instructions about mixing ashes and muck, at what seasons it should be done, and about what proportions should be used, how long it should lie before being applied, &c. As this field lies at an inconvenient distance from the barn, if I can get up a manure of this kind that will take the place of barn-yard manure, it will be of great value to me.

D. T. A.

Northfield, Vt.

REMARKS.—We have already said so much on this subject that we prefer to leave it to some of our intelligent and practical correspondents. The

subject is an exceedingly important one, and scarcely too much attention can be given it. The muck-beds of New England are worth more to it than its share of California gold will be.

EXTRACTS AND REPLIES.

HORSES AT CATTLE SHOWS.

Having noticed a piece in your paper of Feb. 2d, signed "Middlesex," which I read with much interest, allow me to make a few remarks upon the same. It seems that the writer is much opposed to having horses show their speed at our fairs. It is well known for what purpose shows are held; that people may bring together the rich specimens of the productions of the earth; show the ingenuity of our mechanics, the skill of the fair sex, in making butter and cheese, and the handiwork which they accomplish with their needles. All this I like to see brought together, that I may compare with each other, and see if any improvements can be made. Let me ask who wants to go to a cattle show, and look ten or twelve hours on a fat yoke of oxen, a fine cow, or a nice dairy of butter and cheese? Our farmers have large and stout oxen which they like to show, and how large loads they can draw; and why not give the man that has raised a fine horse, the privilege of showing his speed?

The writer says, "Horse-racing has become the most important part of the performance." Shall that part be stricken out? I say no; let him produce the best specimen he can, for speed, for strength, for beauty, and all others that have specimens, do likewise, and all that attend, look at whatever their taste may choose.

Claremont, N. H., 1856.

POTATOES IN 1756.

MR. EDITOR:—I saw in your paper a report of a large yield of potatoes. I have a report before me of a yield of potatoes, raised *one hundred years ago*, in the town of Granville, Mass.

I copy from my grandfather's papers the following: "About the year 1756 my father went to New York, and back again, on horse-back, and brought home four potatoes; two of them froze, so as to lose about half he planted; however, he had fourteen hills from what remained, and had four bushels of potatoes."

N. HITCHCOCK.

Deerfield, Mass., March, 1856.

SUNFLOWER OIL.

Several inquiries having lately been made in regard to this article, we give the following from the Morgan (O.) *Chronicle*. The article is from the pen of Dr. S. A. Barker.

Some years since, several barrels of sunflower oil were made in this county, and those who remember it, never wish to see any more. Some of it was said to have found its way into barrels marked "Linseed oil," and was used for painting. The paint would not dry, and unless some better drier than any now known can be found, it is useless for that purpose. Some was burned in lamps, in Zanesville, we know. While burning it gave out a large quantity of gas, similar to that of charcoal, deleterious to life and health. It is totally unfit for burn-

ing, in a close apartment. Some was used for oiling machinery; but it was condemned even for that purpose. The seeds afford a large quantity of oil, but so inferior for all purposes, that its manufacture should not be encouraged.—*Albany Cultivator*, Feb. 11th, 1849, page 68.

MR. EDITOR:—I send the above, not with any desire to enter into a discussion on the merit or demerit of sunflower oil, but simply to give the opinion of those who know the article; as I presume you prefer experience to theory on this subject.

A SUBSCRIBER.

Middlebury, Vt., March 17th, 1856.

TO KILL TICKS ON SHEEP.

Prepare a solution of tobacco, of sufficient strength to kill a tick when immersed, then immerse the whole flock, one by one, taking particular care that there are no stray ones on the nose and face of the sheep, which, of course, are kept out of the liquor. The operation must be done from the 1st to the 15th of Sept., for two or three reasons. 1. All the eggs then have hatched out. 2. Then the wool is longer than in shearing time, (the usual time to kill ticks) and will consequently absorb more, and more effectually kill even the very last survivor.

E. B. M.

REMARKS.—Is the operation a safe one?

RYE AND WHEAT CROPS.

Mr. Z. HOWARD, *Sudbury, Vt.*, states that some of his rye straw last year grew to the height of seven and one-half feet, and that on three acres of land he obtained seventy-five bushels of perfect Rio Grande wheat. He states, also, that between the hills, on two and one-half acres of corn, he raised thirty-one and one-half bushels of pea beans, and in the pods that grew on one stalk, he counted one thousand three hundred and seventy-five beans, and the product of another stalk was nine hundred and ninety-five beans!

GRAFTING THE GRAPE VINE.

MR. BROWN:—Did you ever know of the grape vine being grafted, with success? I, and many others in this vicinity, have grafted them, but in every instance it proved a failure.

New Ipswich, N. H., 1856. MARK FARRAR.

REMARKS.—We have never grafted the vine, but think it is successfully done by some of the nurserymen. Downing says, "it is attended with much success in the cleft manner, if treated as follows:—Cut your scions during the winter, or early spring, keeping them partially buried in a cool, damp cellar, till wanted. As soon as the leaves of the old vine or stock are fully expanded, and all danger of bleeding is past—say about the 10th of June, cut it off smoothly below the surface of the ground, and split the stalk, and insert one or two scions in the usual manner, binding the cleft well together. Draw the soil carefully over the whole, leaving two or three buds of the scion above the surface. If the root of the stock is a strong, native grape, the

graft will frequently grow ten or fifteen feet during the first season, and yield a fair crop the second year." So long as the grape vine can be obtained so readily by cuttings and layers, it is hardly worth while to graft much, as new shoots from the original root will constantly spring up.

BOILING SHINGLES IN LIME AND SALT.

MR. EDITOR:—If the following fact is of any value, it is at your service.

There is a building in this place, covered with shingles that were taken from another roof, (where they had been in use some years) were boiled in lime and salt about five minutes, and then relaid. This was twenty-seven years ago, and these shingles look, now, as if they would last some years longer.

Other roofs that were treated in the same way since, appear well; they are clean and smooth, the moss does not form on them, and the water runs off readily.

There seems to be no reason why white wash, with the addition of salt, would not be beneficial when applied to a dry roof, in proportion to the lime and salt absorbed by the shingles.

Have you not observed that where the rain washes the lime from the chimney upon the roof, that the shingles remain sound longer than on the other part?

Yours truly, S. E. P.
Springfield, Vt., 1856.

MEAL FOR CALVES.

One year I began the winter with forty calves. The first part of the winter I sold three, as they were wanted for express purposes, which left me a flock of thirty-seven, not to die, but to be wintered, if in my power. All my time was devoted to the care of the calves and the rest of my stock. During the first of the winter, some of my neighbors would say, as they saw them, "you of course must expect to lose some, out of so large a lot." About the middle of winter, I found some three or four to have failed, or did not appear to look quite as well as formerly.

Thinking they must have extra feed of some kind, I cut ruta-bagas with a shovel very fine, and allowed two quarts, with the addition of a handful of oats, to each calf. They still failed under that feed. I thought of what I had read in the *Farmer*, of the value of meal; therefore, instead of the oats, I added a handful of meal. In a few days, I found them to be on the gain. They were all kept through that winter and the next.

T. S. FLETCHER.
West Windsor, Vt., 1856.

WHAT TO DO IN A YOUNG ORCHARD.

MR. EDITOR:—I have ten acres of ground nearly new, of a deep warm loam, one-third is level, and the remainder rather steep, descending to the north and north-east. About one-half of it has lately been set to orcharding, and the remainder is destined for that purpose. It is now in mowing, and yields near one ton to the acre; the grass is thin and tall, mostly herds grass, and the whole is full of blackberry bushes; these I wish to exterminate. The land is good for corn, and excellent for potatoes, but it is so situated that I cannot cart manure on it without fording the Deerfield river, which is generally impracticable at planting time, and always difficult. I wish to make a few inquiries.

1. Shall I plow the apple trees and cultivate without cropping? or—

2. Shall I plow and apply some concentrated manure, and if so, what manure? or—

3. Shall I keep it in grass and sow guano or some other stimulant?

Any suggestions will be thankfully received by

Your friend, P. F.

East Charlemont, Feb., 1856.

REMARKS.—Plow as deeply and thoroughly as possible over every part of the land before the trees make much root. It can be done cheaper and better before the trees are set. Such a position is the very one whereon to try specific manures. Do not mix them. Try guano, superphosphate, fish guano, and Gould's muriate. Thorough work as far as you go, will be more profitable than to have the ten acres in hand and work it indifferently. Three or four hundred pounds of either of the first three, or six to ten barrels per acre, of the last, would be a liberal dressing.

HOW TO KEEP A HORSE.

MR. EDITOR:—I have a valuable horse, and wish to keep him in as good condition as possible, on four quarts of grain daily, and first quality English hay. I wish to know whether it is best to give him all the hay he will eat, or keep him on allowance? Last winter, he was not doing any work, to speak of, and had four quarts of grain and all the hay he would eat, (and he did eat enormous quantities) and was thin at that. I am of the opinion that if he did not eat so much hay he would look better; he is perfectly healthy.

A LOVER OF AGRICULTURE.

Uxbridge, March, 1856.

REMARKS.—Men who have large interests in horses, study into the various modes of keeping and raising them, and learn the true way, so that their example becomes valuable. There is not an owner of a livery stable, or of stage or omnibus lines, who feeds his horses more than three times a day. Whatever grain is allowed is mixed with cut hay or other fodder, and fed to them in this form. Carrots often take the place of hay and grain at noon. Great regularity should be observed in feeding. Treated in this manner, a horse will not consume more than one-half the hay he would under the course you have practiced, yet he will keep in better flesh and strength.

MEASUREMENT OF MILK.

MR. EDITOR:—Four hundred quarts of milk, beer measure, at seven cents per quart, will come to twenty-eight dollars; the same milk in the wine quart, will measure in round numbers, four hundred and eighty-eight quarts, which at six cents per quart, will come to twenty-nine dollars and twenty-eight cents. The milkman that alters his measure from beer to wine, and his price from seven to six cents per quart, gains one dollar and twenty-eight cents on every four hundred quarts of milk, beer measure, sold.

J. B.

March 8th, 1856.

For the New England Farmer.

IMPROVED KING PHILIP OR BROWN CORN.

MR. EDITOR:—Through the kindness of the Secretary of the Board of Agriculture, I received, two years ago, a small bag of this corn for seed; it was planted quite late—the 28th of May—and though the season was very dry, and it suffered from the drought, yet it did very well, and was fully ripe and ready to harvest by the middle of September. I was so much pleased with it, that I planted last year all I could, and though it was planted late again—about the first of June—it was ripe by the 10th or 15th of September. The corn was planted on a dry piece of land, and though it looked splendidly in the early part of the season, yet it suffered severely from the drought, which cut short the crop, and made the corn less sound and firm. From what I have seen of this corn, I consider it a great acquisition, and know of no variety—not excepting even the small Canada—that will ripen so early. It is from a week to ten days earlier than any other I have ever planted. The corn is of a reddish cast, has a large kernel, looks rich and beautiful; the ears are long and handsome where it has a fair chance. I should recommend it to all who plant corn, and want a crop, as it is sure to ripen when other varieties fail. In proof of this, I quote from the Patent Office Report of 1854, where can be found reports from different States, where this corn has been sent and tested.

GILBERT L. BAILEY, of Portland, Me., writes:—“Early last spring, I received from the Patent Office a small quantity of what was called ‘Improved King Philip or Brown Corn.’ I handed it to a friend, Mr. Robert Leighton, of Westbrook. He planted the seed early in June, in a soil composed of a dry sandy loam, hills 3 feet apart, 4 kernels to a hill. The corn was harvested on the 10th of September, and yielded in good full ears at the rate of 120 bushels to the acre. Had it not been for the drought, the yield would probably have been considerably more. Our common kinds of corn did not yield more than half the usual crop. A gentleman living about forty miles in the interior, took 40 kernels of the corn, which he planted after he had begun to hoe his other crop, and in two months and twenty-seven days he gathered 5 pecks of fine full ears from the product.”

P. W. PECKHAM, of Westford, Mass., says:—“Last spring I received a small bag of ‘Improved King Philip or Brown Corn,’ from the Patent Office. To test this corn by comparison with the kinds that I usually cultivate, I planted it at the same time, the 10th of May, and in the same way; it yielded 208 ears of a large size, although several hills were destroyed by the worms. It eared low, and was harvested twenty days before any of my other corn. I usually plant the Rhode Island White Flint and Yellow Canada corn. The seed of the latter I obtain every fourth year direct from Canada, as it ripens later by planting seed raised here. I have heretofore considered it the earliest variety cultivated. From the above result I think the ‘Brown Corn’ is well adapted to our soil and climate.”

Statement of EPHRAIM MONTAGUE, of Belcher-town, Mass.:—“Having received from the Patent Office a sample of ‘Improved King Philip or Brown Corn,’ I planted it the 1st of June, accord-

ing to the directions given. There were 72 hills; the land was on a pine plain, light and rather sandy, with some coarse gravel, on which I seldom raise more than 20 or 30 bushels to the acre with the same amount of manure as was applied in the present instance. I harvested the product early in September; and the amount raised, after being well dried, was 25 quarts of corn of good quality, being equal to 62 bushels to the acre. I believe the variety to be a valuable acquisition to this section of the country.”

J. E. WATERS, of West Millbury, Mass., says:—“On the 25th of May last, I planted a small parcel of ‘Improved King Philip or Brown Corn,’ received from the Patent Office, following the directions given. It was fit for harvesting twenty days earlier than any other corn in the vicinity, and was very sound and good; the yield was at the rate of 85 bushels to the acre. I think it is far superior to any early variety of corn known among us.”

Statement of JAMES DOCKERAY, of North Cannon, Michigan:—“Last spring, I received from the Patent Office a small package of ‘Improved King Philip or Brown Corn.’ I planted it about the 1st of June. The amount of ground planted was a square rod; and the product was one bushel of ears, which will undoubtedly furnish half a bushel of shelled corn, or at the rate of 80 bushels to the acre. My other crop of corn did not exceed 15 bushels to the acre.”

Statement of E. A. PHILLIPS, of Coventry, N. Y.:—“Last spring I planted 78 hills of the ‘Improved King Philip or Brown Corn.’ The product was 121 quarts of shelled corn, equal to about 90 bushels to the acre. This proves the variety to be well adapted to our northern climate.”

Statement of W. M. MAHEW, of Marcy, N. Y.:—“I received the 1st of June last, a small package containing about half a pint of ‘Brown Corn.’ On the 9th of June I planted it, but thought it would never ripen. To my surprise, however, it was fully ripe by the middle of September. The yield was 1½ bushels of shelled corn.”

Another writer of Ontario County, N. Y., says:—“it is at least two weeks earlier than the common kinds planted here. I believe it to be an excellent variety.”

Another says:—“I would recommend its cultivation especially because of its extreme earliness.”

I might quote the opinion of many other persons from different States, all speaking in the same high terms of this corn. And from what I have seen, I am willing to substantially endorse all that has been said by the above-named persons. I shall plant no other sort this year. I consider it worthy of trial by every person who raises this important crop. This corn is yet scarce, and is not to be found only at a few of the principal seed stores.

Newton Centre, March 21.

J. F. C. H.

CULTIVATION OF THE PINE.—We are under a thousand obligations to as many persons, for the kind manner in which they have answered our numerous inquiries on various topics. In another column the reader will find an article on *the cultivation of the white pine from the seed*, by S. B. PHINNEY, Esq., of Barnstable, and Editor of the *Barnstable Patriot*. This history grows out of his own experience. On our visit among the Cape Codders last

summer, we were delighted with the new aspect which they were giving the country, by the cultivation of the pine, as well as by their unaffected hospitality. We hope, yet, to help them drive a school of black whales ashore, and then take a nap in the shade of their beautiful pines!

For the New England Farmer.

KEEPING WINTER APPLES.

"Apples have never kept better than the past winter," is a very common remark. Now we need only to look at the uniform, steady cold of the past season, and we discover one pretty essential condition for preserving fruit.

Apples will not freeze when water will; but a very low temperature will injure the fruit for preservation, when the mercury rises. Perhaps it is best to keep the apple cellar at about thirty-four degrees.

A great many absurd ideas prevail about keeping apples. One man in this town fills his barrels in the fall, and then throws in a pail or two of well water! A good many fill the barrels, and head them tight, and leave them under the trees, on the damp ground, exposed to all the storms. Some head up, and pile the barrels, and cover with a few boards. The apples in these cases are out of sight, but are damaging. Let us see how:

The "sweating" of stones is a familiar spectacle; or of the pitcher of ice water upon the summer dinner-table. The well-known explanation is, that the watery particles—the vapor in the atmosphere—is condensed as it comes in contact with a colder body, and falls upon its surface.

Now apples, when cold, act upon the warm air like cold stones, or the iced water pitcher. The apple is covered with a highly varnished surface, as smooth and as impervious to moisture as the glazed water pitcher.

It must be seen that a frequent showering after the fruit has ripened will slowly *dissolve* this beautiful varnish, which Nature has so delicately laid on. If you break through the hard enamel of the tooth, the bony part hastens to decay. If the skin of the apple is injured, in like manner the pulp soon perishes.

I see no reason to believe in the "sweating" of apples, by which is meant, that moisture passes out of them; I think it a mistake. When kept in thick bodies, or, when closely confined, as in barrels, moisture will collect upon them. I have endeavored to show the true cause. The amount of moisture, however, will depend upon the sudden changes of the temperature. It will never be seen, I imagine, where apples are kept at an even temperature.

When apples are packed in barrels, and become damp, as they invariably will, every impurity about the barrel moulders and becomes offensive. Apples rapidly absorb foul odors, and how often the fine, natural flavor is gone, and an earthy, fishworm, or musty and offensive one, substituted.

I had the impression once that apples must be "headed up" ever to see the spring. I have proved, by many years' experience, that some kinds will endure till *Summer*, if left in open barrels or boxes. I prefer bins to hold apples. The apples keep better, and are sorted with more dispatch, to

say nothing of less room being required for storing the same quantity.

Apples that are intended for spring sales should be gathered more carefully. They ought *never to be turned from the basket to the barrel*. A little care here will save much future loss.

I have some further thoughts upon this subject, which I defer till a future time.

I wish, Mr. Brown, that you would "call up," as you do so successfully, as President of our Farmers' Club, Mr. SIMON TUTTLE, of Acton, Mass. His large experience in wintering apples entitles him to the floor; which, for him, I now cheerfully yield.

W. D. B.

Concord, Mass., March 25, 1856.

REMARKS.—Mr. TUTTLE is called for. Will he be kind enough to "let his light shine?"

For the New England Farmer.

HOW TO MAKE GOOD BUTTER.

MR. EDITOR:—Having read several communications in the *Farmer* on making good butter, and not seeing any that comes up to my ideas, I will now give my practice, (or rather, that of my wife,) and some of the causes of not making good butter.

1. Milk should never be set for butter in a dark, damp cellar—as is the case with butter-makers in this section—as the cream is thereby moulded before it has had time to rise, which gives the butter a mouldy taste.

2. The milk is allowed to set too long before being skimmed, which gives it a cheesy taste.

3. The cream is kept too long, before it is churned, after it is skimmed, which gives it the taste of the other two; and also a sour taste.

4. The butter should never be washed in water, because it takes away that beautiful aroma so essential to good butter.

5. It should never be taken in a person's warm hands, as the heat melts a certain portion of the globules, which gives it an oily taste, and makes it become rancid very soon.

6. The milk should be set in good clean tin or earthen pans, in a dry, open, airy and shady place, above ground, if possible, although a cellar may be so built, and ventilated, as to answer the purpose. It should never set over twenty-four hours, in warm weather; and for a dairy of three cows or over, the cream should be churned every morning, and never be kept over forty-eight hours, in warm weather; in cold weather, it may be kept longer. It should always be about the same heat that the milk is when drawn from the cow, and churned steadily, and I have never known it to fail of coming readily; (we use a cylinder churn) it is then taken from the churn with a wooden butter ladle, into a wooden tray, which has been well scalded and cooled in pure cold water; the salt is then worked in, to suit the taste, with the ladle, which is easily done, with a little practice, and the butter-milk well worked out; it is then set away in a cool place for about twenty-four hours, when it is well worked over again, as long as milk or pickle can be worked out. Butter made in this way, and put down in stone pots, and kept from the air, will keep good for a long time.

C. A. W.

Kennebunk Depot, March, 1856.

TWELFTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY H. E. ROCKWELL.

The *twelfth* meeting of the Legislative Agricultural Society was held in the Hall of the House, Tuesday evening.

Hon. J. W. PROCTOR, of Danvers, was introduced as the Chairman of the meeting, and said :—

GENTLEMEN :—Unexpectedly invited to preside at the discussion of a topic, on which I cannot claim to have any special knowledge—"the horse"—I am happy to know, that arrangements have been made to have a lecture from my friend Mr. HOWARD, of the Boston *Cultivator*, who knows all about it. It is a matter of great interest to the farmer, and the entire community; and although, on the introduction of railroads, it was apprehended, these movements would, in a measure, do away with the necessity for the horse, still experience has shown that the demand for good horses has been constantly increasing, and never were they deemed of more value than at the present moment. I am advised by those experienced in the rearing of horses, that there is no species of stock on the farm that pays better for rearing than *colts*, when proper care is taken to have sires for them of the right character; they will, at the age of three years—properly trained—command remunerating prices. But I forbear to multiply remarks, that will be so much more impressively made, by those of more experience in this class of animals.

Mr. HOWARD, of the *Cultivator*, was then introduced by the chairman, as before announced, to speak upon the subject of "*The Horse*."—He commenced by saying that the horse is a native of the old Continent *only*. And there, wherever man has risen above the savage state, the horse has been held as a servant. He was possessed by the earliest civilized nations; and from time immemorial, has been propagated in a domestic state, although still found in his original wildness and liberty in the vast wastes of Central Asia. Although the horse, in point of usefulness, cannot claim superiority over some other domestic animals, he has always been regarded with peculiar interest. All the varieties of the horse are included in one species under a zoological arrangement. Yet some varieties are so ancient that their origin cannot be determined. Those of greater bulk are found in temperate climates, and those of a smaller size in elevated, exposed and rough sections of the country. It is difficult to account for the difference between the English draft horse that weighs a ton, and the Shetland pony which weighs scarce 200 lbs.

The conformation of the Arabian horse is such as to combine great speed with great strength, to carry weight upon his back, and he is, on this account, placed at the head of his species. There is

evidence that horses have been bred upon the Assyrian plains for thousands of years. Late researches among oriental cities have brought to light sculptured images of horses that may be taken as *fac similes* of the Arabian in the days of Sennacherib or Nebuchadnezzar. Job's sublime description of the horse would scarcely apply to a less noble animal than the Arabian.

The early colonists brought from different parts of Europe different varieties of horses to this country. From those brought from Spain have sprung the half-wild horses of Mexico and some of the South American countries. In the United States there are but few breeds. We have had, for many years, the English racer. The Germans introduced the heavy draft horse of their father-land, and it is still perpetuated. Some specimens of the Norman horse were introduced into New Jersey, but the stock has not been numerous. In Canada there is a breed somewhat different from the original stock, introduced from France. In the upper provinces are specimens of Scottish, Clydesdale and other breeds.

The horse may be called a machine, and he performs certain actions corresponding to his shape and proportions. Though it may be said that horses of different shape perform the same things, it does not disprove the proposition; for an imperfect engine may be made to run at a high speed by the application of steam. The animal machine is set in motion by what we call nervous energy and force, and a large amount of this force may produce great results, even in a badly formed animal. It may safely be assumed, that, other things being equal, the best horse, in the end, is that having the truest form considered in reference to the kind of action required. The qualities demanded for different kinds of service were then pointed out. For the race horse, the model was something like that of a hare, having the hind parts more elevated than the fore quarters. The celebrated English horse Eclipse is said to be two inches higher at the rump than the fore shoulders. A long back is favorable for a race horse, where a long race is to be run with a light weight; but a shorter back is to be preferred when a weight is to be borne a short distance. For a trotter, oblique shoulders and higher ones are required. Good trotters never have upright shoulders. In general, the highest nervous energy accompanies the firmest and closest texture. The English race horses are derived from the Turkish, Persian, Arabian, Moorish and Spanish stocks, with the blood of a British horse in some instances. There is no variety of horse in Great Britain that has so many different qualities as the so called thorough-bred horse. The term "thorough-bred" is used in England to distinguish the imported or Eastern blood, though the particular kind, whether Arabian or Moorish, is not specified.

The term "blood" as applied to horses is generally without any good foundation. The race horse of England is not any more pure blood than any other kind that distinguishes him; for the draft horse and the pony are more pure. The term is only used to distinguish the racers.

In this country, the nearest approximation to a distinct breed is that of the Morgan stock. That breed has acquired wide-spread notoriety. Some of that stock was taken from Vermont to Canada, and were thence taken to England as cavalry horses, and they were examined and highly praised by the late Duke of Wellington. The origin of that breed cannot be ascertained in every particular. The first one was owned by Justin Morgan, of West Springfield in 1782. He was sold to a man in Randolph, Vt., in 1795.

Mr. Howard related the following narrative to show that the horse owned by Justin Morgan was once owned by Col. James de Lancy, a British officer. He said he ascertained that a horse called "The True Briton" was stolen from Col. De Lancy, and he went to visit at Morrisiana, an aged man, who once lived with Col. De Lancy, by the name of Andrew Corsey. When he visited him he was ninety-five years of age and very deaf. But he learned from him that Col. De Lancy's horse was stolen by a man by the name of Smith, of Hartford, Conn. Smith, after peace was declared, called on Col. De Lancy, who received him with cordiality, and invited him to take breakfast with him. While he was at breakfast, Col. De Lancy went out to the barn and got a rope, and commanded his slaves (slavery existed then in New York) to go into the house and put the rope around the neck of Smith, and hang him, and it was done. The facts thus stated are reliable, and there is reason to suppose that the "True Briton" and the sire of the horse of Justin Morgan were the same.

The first Morgan horse was extensively used as a sire in Vermont, and lived to an advanced age. His progeny were easily distinguished, and those of even the second and third generation retained the points and properties of their progenitor. Only four of his male progeny were kept as sires. Those were Sherman Morgan, Woodbury or Burbank, Chelsea or Bulrush and Revenge. The Vermont Black Hawk was the progeny of Sherman Morgan. On that point there could be no doubt, Mr. H. said, as he had in his possession abundant proof of it.

In England the coach horses are bred in a different way from the racers and roadsters. In order to obtain horses of a peculiar quality, it is necessary constantly to select those for sires which possess most nearly the desired qualities. In closing, he called attention to a fine representation of a young horse, Trotting Childers, painted by an English artist. His remarks occupied half an hour, and were listened to with great interest.

The chairman said it would seem that the best breed of horses came to us by a Yankee trick; but as the theft was atoned for, we have a right to enjoy them. In Essex County the question had been considered of the propriety of encouraging the rearing of fast horses, by trotting exhibitions, and they had come to the conclusion that it was not desirable. There is more interest now than formerly in horses for the market. They usually get \$100 for them at three years old. Notwithstanding the great number of railroads in the country, he thought there never was more demand for good horses than now nor more encouragement to raise them.

Mr. BROWN, of Concord, expressed his gratification with the address. Such addresses as take up particular topics and discuss them thoroughly were much needed. There was, as he thought, great need of paying close attention to the breed of stock of any kind, and especially of horses. He believed in the doctrine, "once impregnated always impregnated." But horses need education as much as human beings, and it is true of them as of men, that,

"Just as the twig is bent, the tree's inclined."

The gait of a horse may be fixed by early training, to a great extent, so that if rightly managed it is as well to have a gait of eight miles as one of four per hour. But even with good teaching and good masters, horses will sometimes be bad. Feeding colts on refuse coarse food, which they are compelled to pick up in the barn-yard, is very poor policy; and the same is true with regard to calves.—If horses and cattle are thus cheated of their rights in their younger days, it is unreasonable to expect much from them. He closed with an earnest appeal for humane and kind treatment of horses in the matter of driving and working them, protesting against the practice which is quite common, of overloading and then beating them to make them draw beyond their strength. Every man who thus cruelly treats his horse ought to be severely punished.

Mr. A. G. SHELDON, of Wilmington, said that there ought to be more mercy shown to horses after their best days are past. Every market day, there was time and money enough spent in trotting and trading off old, worn-out horses, at Brighton market, that ought to have been dead for years, to buy a good dairy of cows. He said that he wished to be understood in his remarks last week, to say that after bulls were two years old they ought to be broken to the yoke, and not that they should not be kept any longer. He thought the dairy was the most profitable farm stock. He did not think the Berkshire hogs the best for pork. He liked the Suffolk breed when crossed with others, but believed it would cost as much to raise one full-blood Suffolk pig, as four of a mixed breed.

Mr. W. J. BUCKMINSTER thought it important to inculcate the idea that to make a good farmer,

required a high degree of good judgment and careful observation. He thought horses were much less frequently abused than formerly, in the city of Boston. When we see faithful animals willing to do all they can, it is our duty to interfere in their behalf, when they are abused. There is no necessity for abusing cattle in training them. He deprecated the practice of having the time at cattle shows taken up by exhibitions of fast horses. It was wrong, in his opinion, to encourage the tendency to fast driving, by such exhibitions.

Dr. FISHER, of Fitchburg, spoke of the relative value of mules as farm stock, and especially for work. He purchased a pair last spring that weighed 700 pounds each, and he found that they could be kept very cheaply compared with horses. His horse, which weighs between 1100 and 1200 pounds eats more than both the mules, while they will do nearly double the work that he will. They will work more hours, are less subject to diseases and accidents, need but little grain,—none except when worked hard. He had not found any bad tricks in them, though it is often objected to them that they are apt to be tricky. They will pay for good treatment as well as a horse, and will bear poor treatment much better. They know how to shirk, it is true, and in that respect seem to be more intelligent than the horse. They will draw as much on a drag as a pair of oxen that weigh 2800 pounds. A pair of mules weighing 1400 pounds will do nearly or quite as much work as a pair of horses that weigh 2200 pounds, and they will not eat more than half as much.

Mr. EMERSON, of Boston, added that the life of mules is much longer than that of horses. It is a proverb in Virginia that a mule never dies. Their working life is nearly fifty years. He thought them a better working animal than any other. He also spoke of the comparative profits in keeping different kinds of animals. Fowls require less sustenance, in proportion to the amount of meat they will furnish, than any other animal; and next to them was the sheep. He had found great difficulty in keeping sheep, however, because they were so apt to be unruly.

Mr. R. S. FAY, of Lynn, said sheep might be trained so as to be kept within their proper limits as well as any other animal. His own sheep pastures were enclosed with low walls, and though the feed was often poor, and there were vegetable gardens and much better feed adjoining the pastures, he had never known his sheep to go over the walls. He bought them in New Hampshire and put them on to his farm five years ago, and though they were as wild as any sheep when he purchased them, he had found no trouble in keeping them within their proper bounds, though they were tended only by a boy fourteen years old. They had become perfectly docile, and literally exemplified the Scripture

language, "My sheep hear my voice," &c. If sheep are kept under the care of any particular person they will always come at his call. He thought nothing was more important for farmers than to have a certain proportion of his farm stock consist of sheep. There is no manure so fertilizing as that of sheep, and it does not so readily waste by exposure as that of other animals. Sheep are gleaners after other cattle, and will help to keep the cattle pastures in good condition by being turned upon them occasionally to eat the coarser plants which have been left by the cattle. They will enrich the land, too, and may be made exceedingly useful in helping to prepare land for a crop. A German agriculturist has calculated that the droppings from one thousand sheep during a single night would manure an acre sufficiently. By that rule a farmer may determine how long to keep any given number of sheep upon any particular piece of land. Mr. FAY said he was accustomed to fold his sheep upon land that he designed for corn and other crops; and in doing so he shut them upon half an acre at a time, keeping them there by a wire fence, which was easily moved from place to place. He kept his flock of three hundred, five nights upon half an acre, and then removed them to another half acre, and in this way his land was well manured without the labor of shovelling or carting. He thought that the lambs and manure paid for keeping, and the wool was clear profit.

For the New England Farmer.

GRAPES AND SWEET POTATOES.

MR. BROWN:—I noticed in the *N. E. Farmer* for February, on page 97, a paper on the cultivation of grapes, in which you give full information how to prune the vine, &c. Now if in your March number you will point out to us all the kinds of grape vines that are best adapted to our climate, giving directions, first, what kind of grape vine is best to purchase; second, how they ought to be set out; and at what time each kind ripens in your state, I, and many of my neighbors, will give them a fair trial. Three years ago I sent to Boston and got three Isabella vines, and set them; last season they bore thirty-six pounds, and ripened well. I took them off the vines Nov. 11. I have one later vine that bore last season, but the fruit did not ripen. I have two Diana vines, not in bearing; one Concord vine, not in bearing; one Amber, and one Sage. Now as I wish to get more vines in the spring, will you direct me what kinds to purchase, and how old vines it would be best to get, and insert in your March number?

Now one word about the

CAROLINA SWEET POTATOES.

Last spring I got half a peck from Boston, split them lengthwise, made a kind of hot-bed, and there placed the pieces side by side each other. About the last of May or the first of June they were three or four inches high; I then cut the sprouts or slips in very small pieces, and set them out in the same way I do cabbage plants; they grew well, the vines run on the ground two or three yards long, and as

soon as frost came, I went into my garden to dig them. To my surprise, I found not one potato in the form of those I planted; but I found their roots had run one and two feet in length in the earth; the diameter of a few may have been two inches, but the most of them were not over half an inch. Now I presume I did not cultivate them right, and I wish to obtain information from you. I am a decrepid old man of 76 years; but if I should live, I want to raise potatoes and grapes.

NICHOLAS THOMAS.

Eden, Hancock Co., Me., Feb., 1856.

CULTIVATION OF THE PINE.

In a recent number of the *New England Farmer* the editor of that paper, Hon. Simon Brown, while answering the inquiries of a correspondent in regard to the cultivation of the Pine, alludes to a thrifty young plantation of this valuable forest tree of our planting, which he noticed during his visit here last season, and asks for some information in regard to our mode of cultivation. We are happy to give the method we pursued in the planting of a tract of about ten acres—if thereby we shall encourage even one individual to attempt a similar enterprise, which, when properly begun and carried out, is sure to return an hundred fold.

In the Spring of 1846, we fenced off half of a tract of about twenty acres of land almost exhausted from its manner of cultivation in many former years:—the half we selected for planting had not been used for grain or other crops for several years, the soil being light, and sandy, and from the high location of the ground, difficult and expensive to cultivate. It was at the time we speak of mostly covered with mosses and whortleberry bushes.—We began its reformation from a brown, bleak, and almost useless pasture, as it then was, to a very thrifty and beautiful plantation of Pines, as it now is,—the admiration of all eyes capable of appreciating “woodland beauties”—by first having shallow furrows plowed to the depth of about five inches, and four feet apart. The hills for the pine seed were then prepared in these furrows in the same manner as for corn, into which three or four seeds were dropped and covered with about a half an inch of soil—the hills were four feet apart. A man and boy planted in this way about four acres a day.

Not more than two-thirds of the seed came up after the first planting, and did not grow over four inches during the first season. The first shoots much resemble those of an onion and are nearly as tender. In the autumn and spring following this first planting, those portions of the ground where the seed had failed to germinate were replanted, and in due time were seen the tender shoots of the Pine, which now covers the entire ground with a dense and thrifty body of trees.

During the first three years, their growth was quite slow, but after that period, they averaged an annual increase of more than a foot in height, and at the present time, many of the trees are twelve feet in height, and the majority will average about nine feet.

Others in this vicinity have been equally successful, by a similar mode of cultivation. Amos Otis, Esq., of Yarmouth, has planted about two hundred acres, and is one of the most experienced cultivators of the Pine in this section of the State. He plant-

ed upon land of a light loamy, or sandy soil, which was for the most part exhausted, and of but little value for any other purpose. The experience of our cultivators has shown, that land worn out and too poor to sward over thickly, is best adapted to the growth of the Pitch Pine. The months of March and April are considered the most favorable for planting, although Mr. Otis says he has planted in every month in the year,—the summer months excepted.

Where a small lot of land for experiment is taken, a plow may be run through the land, making parallel furrows about six feet apart, then take a common planting machine, such as is used for planting beets or onions, and run it along in the bottom of the furrows, dropping three or four seeds in a hill, about a foot apart, covering them not more than half an inch deep. If all the seed vegetate, there will be a much greater number of trees than can grow on the land, but they will die out in the course of a few years.

Large tracts of worn out land in Barnstable county, that were worth comparatively nothing, have been planted, within the past fifteen years, with the Pitch Pine. In most cases, these experiments have been very successful.

The seed can be procured by gathering the cones of the Pine in the autumn, and keeping them in a warm, dry place, until a leisure season in the winter, when the seeds, which have a small wing attached to each, can be easily rubbed out. When planting by hand it is not necessary to rub off this wing, which must be done, if the seed is dropped by a seed planter.

The growth of wood upon the ten acres we planted in the spring of '46 has been so rapid as greatly to increase its value. The value of the ten acres, at that time, was less than \$75.00. Within a few months, \$300 has been offered and refused, for the same land.

We know of no way in which the many thousand acres of poor, sandy lands in this State, can be made so valuable, as by planting them with either White or Pitch Pine seed. Such was the favor with which the Barnstable County Agricultural Society viewed the experiment we made in planting the seed of the Pitch Pine, that a liberal premium was awarded therefor in 1853. We trust similar experiments to our own will be made by many others, and with equal success.—*Barnstable Patriot*.

SUBSOILING VS. DRAINING.—There is no doubt but a soil made deep and mellow will resist both drought and deluge better than a thin, hard soil. The reason is obvious. If you have two inches of soil on a board, or in a box, half an hour's rain makes it complete mud, and a half day's sunshine will convert that mud into hard lumps, especially if the soil is clay, or any considerable part clay. But if instead of two inches it is two feet, it will take a long rain to wet it through, and no part of it will be mud, until there is water enough to make it all mud, and then in drying, no part will be very dry until the whole is dry. A deep mellow soil will bear a larger amount of rain without destroying its loose, porous character to such a degree as to exclude the air. So far as we have observed, a piece of dry, gravelly soil, if plowed deeply, will stand a drought better than wet clay soil if plowed shallow, and underlaid by clay or hard pan.—*Culturist and Gazette*.

For the New England Farmer.

THE DOUBLE PLOW.

MR. EDITOR:—I have a piece of high loamy land that I wish to plant with corn the ensuing season. I wish to plow it deeper than it has been in times past, and should like some information about the double plow. I should like to know what proportion harder they draw than No. 2, Eagle. I have never seen one, but if they are an improvement, I should like to try one, if they can be managed in land where there is some fast rocks, but not many small stones.

I have been actively engaged in the cultivation of the soil for more than half a century, and my interest in it increases with my experience. I am satisfied that it is the best employment for all who are calculated to follow it.

Making money should not be the sole object of the farmer; utility should have some weight with him. If he can take one acre of unproductive land, and make it produce fifty dollars worth of the necessities of life, he has done much towards supplying the real wants of the race. Another has dug five hundred dollars worth of gold in the mines of California; he has done nothing towards supplying the real wants of life, but has been living upon the products of the farmer all the time.

THOMAS HASKELL.

Gloucester, March, 1856.

REMARKS.—It is said by good judges who have used the double plow, that it requires no more team to plow ten inches deep with the double plow, than to do it with a single mould-board. Indeed, they say it does not require so much team; and from the experience we have had—and we have used the double plow considerably—we are inclined to agree with them. The double plow does the work better, because it separates the sod or turf from the lower part of the furrow, and lays it all snug on the bottom of the preceding furrow. When plowed well in this way, the field presents a mellow seed bed, which may be wrought without disturbing a single turf.

For the New England Farmer.

PASTURES ABOUT THE MONADNOCK.

MR. BROWN:—In your last, I noticed a communication over the signature of "Jonas Wilde," calling in question my statement respecting the pastures in N. H. If in error, I certainly wish to be corrected. If I have been deceived, and what appeared to me poor grass, spreading over whole townships, and converting, what was once fertile, fattening pastures, into "old fields," if this was an optical illusion,—if the many intelligent farmers with whom I conversed, and who made special mention of this evil, if they were mistaken, and the pastures are still "as good as new," it will certainly afford me pleasure to stand corrected.

"If New Hampshire," says Mr. Wilde, "makes less butter and cheese than she did formerly, it is, no doubt, owing to the increasing manufactures." Now if increasing manufactures have a tendency to kill out the grass upon the hills, and thus diminish the quantity of butter and cheese, the matter ought to be looked into.

The opinion extensively prevails, that manufactures and agriculture are twin sisters; that they assist, and are mutually dependent upon each other; that together with commerce, they constitute a trio, which is indispensable to a full development of the human faculties, and the highest possible degree of perfection in civilized life.

The legitimate effect of manufactures is to improve agriculture. This it does in various ways; but especially by creating a home market, and giving to the products of the farm, and the farm itself, an increased market value. And when farmers, as is sometimes the case, manifest a disposition to quarrel with manufactures, they are, unconsciously, perhaps, but not less truly, laboring to bite off their own noses.

That the evil of which I made mention, does exist, and that, too, in the region round about Monadnock, and in many other parts of the State, and in Massachusetts, is a truth so obvious, that he who runs or walks through any of those regions, in the months of August, September or October, may read and understand.

R. B. H.

For the New England Farmer.

LINES.

BY H. D. WHITE.

Written on the margin of an engraving entitled—"THE FARMER'S WINTER HEARTH."

O! if there be one spot on earth
Where cloudless bliss and joy have birth,—
Where blighting sorrows seldom come,
And envy's bitter tongue is dumb—
That spot of quiet, peace and mirth
Is found beside the "FARMER'S HEARTH."
Thrice blessed spot! where friendship's light
In many a lovely eye is bright—
Where hearts and hands to kindness given
Prepare an antepast of HEAVEN,
And consecrate a "humble cot!"
With that which kings in vain have sought.

Wendham, Ma., 1856.

For the New England Farmer.

MR. HUNTINGTON'S COW.

This afternoon (March 24th,) in company with a friend, a good judge of cows, I travelled a mile, to see this animal. We found her all she had been reputed to be, and more. My friend thought her the finest looking animal of the kind he had ever seen. She is now seven years old, of a uniform chestnut red color, considerably above the medium size, with all the points of a superior milker fully developed. She is expected to calve this next month, but still yields a fair quantity of milk. It will be remembered that she yielded two pounds of butter per day, the last season.

Mr. Osborn has a heifer from her, now thirty months old, expected to calve soon, a perfect likeness of the original. I speak of these animals for the information of those who are curious to look at animals worth seeing, and challenge the production of their superiors.

The Guenon sign is fully developed, both in the mother and her offspring. This animal is larger than was the celebrated Oakes cow, but in all other respects quite her equal. She is worthy to be seen—the owner is not inclined to part with her.

South Danvers, March 24.

P.



AN ORNAMENTED COTTAGE.

In our January number we gave the engraving of a cottage, with its surroundings, but rather as an example of good taste, in its external appearances, because we had no means of showing its internal arrangements, or its cost. We spoke at the time of the influences of *our childhood's Home* upon the heart and character in after life, and ventured the opinion that they may be greatly affected by *The House we live in*, while we are young, and the mind easily and rapidly receives impressions. It would be pleasant to continue these thoughts a little farther, but on glancing at the plan which we now present to the reader, we find that to give a fair understanding of the matter, the accompanying description will occupy all the space we can afford for the present on this topic.

This house is intended for a large family who have few calls to the city for business, and may be so contrived as to render an occasional winter residence pleasant and agreeable. It would differ from a country home in its more free expression of architectural style, and upon the plan of its apartments being rather adapted to pleasure occupancy than to constant family use.

The beauty of simple form, honestly used, is the highest charm a building can possess; and the graceful blending of outlines formed by the adapta-

tion of a somewhat irregularly shaped edifice, to the ground upon which it stands, will result in a picturesque object more truly beautiful than whimsical planning and ornament can effect.

The situation for which this building was contrived was one of the many bold and beautiful ones overlooking the rich valleys of the Housatonic, in Berkshire County, Massachusetts. The view was of great extent, and had an air of quiet repose, fitly in character with the feelings that would tempt the construction there of a summer abiding spot.

The plan is arranged thus. In front, a few steps, protected by an overhanging balcony to the window above, lead to the hall door, which opens into a vestibule, No. 1, on either side of which are hall closets with sash doors towards the inner hall, and narrow windows upon the exterior.

Within this is the inner hall, No. 2, and in it the principal staircase. This hall is ten feet in width, and, exclusive of the entry and closets, twenty-eight feet in length.

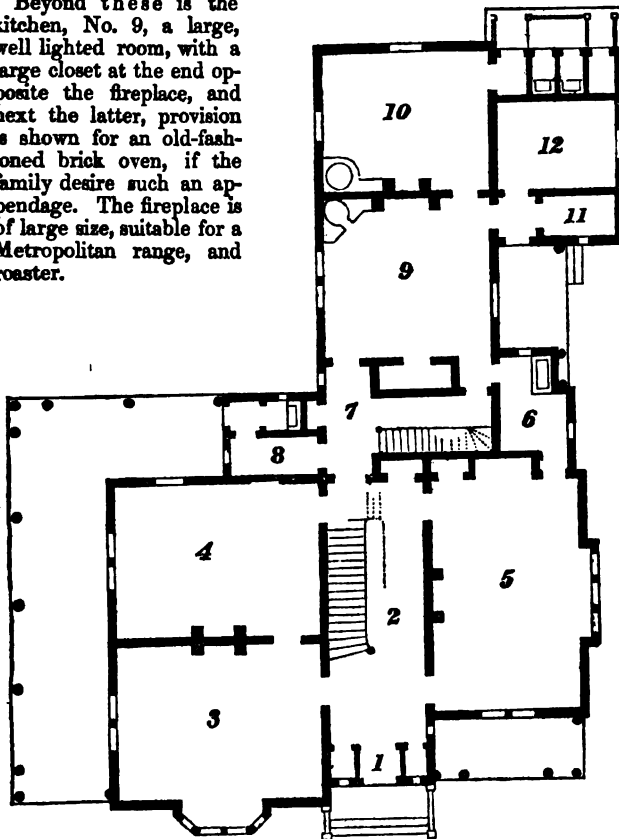
Connecting with it upon one side is a drawing-room, No. 3, with a projecting window in front, and a double window opening on to the side veranda; its dimensions, exclusive of bay-window, are twenty-two by sixteen. In the rear of this is the library, No. 4, the same size as the drawing-room, with the exception of the space inclosed by the projecting window. In this room are double windows to the veranda at the end, and one at the side, correspond-

ing to which is a recess in the wall for a mirror, the finish around which should be the same as that of the window, and the symmetry of the room will thus be preserved.

Upon the other side of the hall is the dining-room, No. 5, a fine apartment sixteen by twenty-four, exclusive of a recess at one end for a side-board, and a projecting window upon the side. The room also contains a closet, and attached is a pantry or waiters' room, No. 6, with a sink, and a door connecting with the kitchen.

At the end of the principal hall a sash door leads into an entry, No. 7, from which is the back staircase to cellars below and floors above. In this is a closet for fishing apparatus, baskets, &c., and from it a door leads into a dressing-room, No. 8, containing wash-stand, water-closet, and an outer doorway leading to the veranda.

Beyond these is the kitchen, No. 9, a large, well lighted room, with a large closet at the end opposite the fireplace, and next the latter, provision is shown for an old-fashioned brick oven, if the family desire such an appendage. The fireplace is of large size, suitable for a Metropolitan range, and roaster.



ORNAMENTED COTTAGE—PRINCIPAL FLOOR.

In the rear of the kitchen is the laundry, No. 10, with a boiler inserted near the fireplace, and from this a door leads into an entry connected with a platform conducting to the outer yard, and, as shown by the plan, two water-closets, and a tool-house, are inclosed within this portion of the building. The remaining portions of the plan are No. 11, a larder, and 12, a small wood-house for the storage of fuel for immediate use. A side veranda shelters a rear entrance to a hall leading to the kitchen, &c., by the side of the larder, and examination will show that every comfort and convenience has been secured, in the arrangement of the plan of this

floor. The height of the rooms in the main part of the house is eleven feet, and that of those in the kitchen wing, nine feet six inches.

The chamber plan shows a large hall, No. 1, at the end of which an arch opens into a lower bay, from which is a window on to the balcony. From the side of the hall a similar arch leads into a vestibule conducting to a chamber, No. 2, by the side of which is a large hall closet, and in the room itself one of ampler size and fitted with drawers.

In front of this is a chamber No. 3, and at its side a large closet. Upon the other side of the hall, above the dining-room, are chambers 4 and 5 with closets.

The wing building contains a bathing-room, No. 6, which is provided with a door into chamber No. 2, so that in case of necessity they could be used in connection. The entry, No. 7, has in it a house-maid's closet and sink, and under the stairs which lead to the space in the roof above the ceilings, in the principal body of the house, is a large linen closet.

Nos. 8 and 9 are large bed-rooms, each one provided with a fireplace and closets, and 10 and 11 are sleeping-rooms of smaller size.

In the front part of the house the high pitch of the roof affords an opportunity of partitioning-off, if wished, three good sleeping-rooms for servants, though independently of the increased accommodation thus capable of being made, the plan shows that a liberal amount of room is laid out upon this floor.

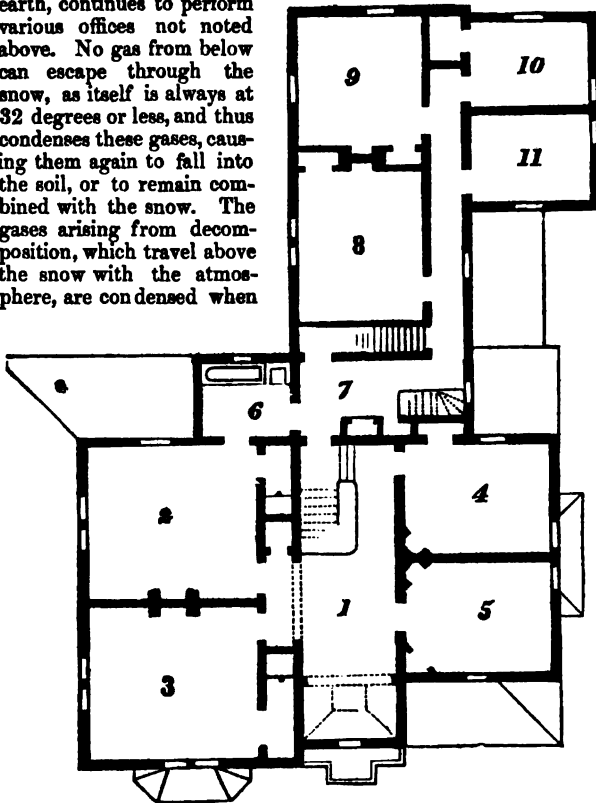
The cost of this building, finished fully, including a large furnace to render the house comfortable in case of winter occupancy, plumbing and painting, would depend upon situation; in the instance for which the design was made, the contract, comprehending all these, was about six thousand dollars, but a very careful finish was insisted upon, and the house contains all the appendages found in a suburban villa.

We have given above, so much of the description as will give an idea of the internal arrangements of the house only, leaving much that ought to be carefully

studied by the persons proposing to build. The cuts, and mainly the descriptions, are from an excellent work entitled *Homes for the People*, by GERVASE WHEELER, architect, N. Y. city, which we earnestly recommend to all disposed to adopt the plan which we now present.

BENEFITS OF SNOW.—Snow, from the porous condition of its particles, receives from the atmosphere while falling through it, all gases before held in suspension, and after it reaches the surface of the

earth, continues to perform various offices not noted above. No gas from below can escape through the snow, as itself is always at 32 degrees or less, and thus condenses these gases, causing them again to fall into the soil, or to remain combined with the snow. The gases arising from decomposition, which travel above the snow with the atmosphere, are condensed when



ORNAMENTED COTTAGE—CHAMBER FLOOR.—See p. 224.

in contact with it, and are continually passing in this condensed condition through the snow. As a mulch, snow is better than any other substance, and is of material benefit. It is a mistake to suppose that rains cleanse the atmosphere as thoroughly as snow. Many instances are given by Liebig and others, of snow having the smell of urine and other fecal matters so strongly, as to be easily recognized.—*Working Farmer*.

A FRENCH PUFF, TRANSLATED GRATIS.—The greatest clothing establishment in the world is that of M. Godillot, in Paris. It employs sixty-six sewing machines, kept in motion by a steam-engine of nine horse power, and which sewed all the overcoats for the Crimean army. The superintendent of the establishment is the Emperor's tailor, Dussantoy, who has invented a cutting-machine capable of cutting out fifteen suits at once, almost with the rapidity of lightning. Besides the machines, one thousand women and girls are constantly engaged at sewing.

AGRICULTURAL PUBLISHERS.—The literary correspondent of the *Boston Traveller*, referring to the publishing house of C. M. Saxton & Co., of New York, says:—

It is an item worthy of note that New York contains the *only* publishing house in the United States, indeed in the world, which devotes itself *exclusively* to the publication of agricultural works. This

house is that of C. M. Saxton & Co., which has not long since moved into commodious rooms at No. 140 Fulton Street, near Broadway. Here they keep a complete assortment of agricultural works, and a reading-room supplied with all the agricultural and horticultural journals of Europe and America. Their list of publications comprises nearly one hundred different works, embracing the whole range of farming, gardening, planting, &c., &c. Mr. Saxton founded the house some nine years since, and for seven years has confined himself directly to the speciality we have referred to. It argues well for the intelligence of the agriculturists of this country that they require so large an establishment to supply them with publications bearing upon the diversified interests of their occupation. Among the publications of this house just issued are—*The Grape Grower's Guide*, *The Cranberry Culture*, *Strawberry Culture*, and *Peroz's Culture of the Vine*. They have also in press a new work by W. N. White, of Athens, Geo., upon *Gardening for the South*, intended especially for that section of our country.

We take pleasure in corroborating the above. This firm, by devoting itself directly to the interests of the agricultural community, has furnished a vast amount of practical knowledge to the public, and by the reasonable

price of their publications, placed them within reach of all classes. Farmers, planters, gardeners, &c., who want agricultural books, will always be able to procure them of this firm, the great leading house of the kind in the United States.

SHADE AND FRUIT TREES.

Let every child set a tree. We have nothing now to say to the men; *they* will set trees, of course, and tend them well after they are set! But the *child* who has never set a tree, knows little of the enjoyment in store, if he or *she* has not one tree to care for and love, and water and feed and watch over, as it bursts into new life and beauty and promise at each returning spring. He who has practiced it, will know the sweetness of the enjoyment, and when the tree has gained stature and strength and sent out its broad and leafy branches to shut out the noon-day sun, how gratefully will he listen to the songs of birds that nestle and feed their young about him. And for this kind provision of a home, *they* shall teach him lessons of wisdom and trust, or beguile his hours of labor with their cheerful notes, or protect his crops from enemies so minute as to escape his own observation.

Parents should encourage each child to plant a

tree. It will be an object of interest through life, be often remembered, or spoken of or visited.—Children will gather around it and relate old incidents of the homestead, and not only will it become the centre of clustering affections, but of gathering hearts themselves. "My father planted this elm," said a gentleman to a happy group, "when I held it in place at the age of five years; I remember it well. See how its branches extend, and shield us from the burning rays; more than a dozen families people its sheltering top, whose social and happy lives are perpetual lessons of confidence and love. My children ever read them with delight, and daily bless the memory of their grand-parent, who planted this tree. In imitation of his noble example, they, too, have planted *their* trees, and these groups about us, lifting their heads to the skies, or reaching away into the air, are so many good genii around our dwelling, protecting and adorning and influencing all."

Now, is the time to decide what and where to plant. Shall it be one of the varieties of the elm, prim, and all its length of a size, like a maiden's dress in days gone by? or the vase-form, or the weeping elm? Will you select the red or white maple, the stately ash, the rough, but noble oak, the pendent willow, the wide-spreading beech, the horse chestnut, black walnut or some evergreen?

Our New England Flora is unsurpassed; the nurseries, and the woods and pastures, abound with beautiful specimens of most of our varieties. What child in the country will feel that its whole duty is discharged, who has not PLANTED A TREE!

For the New England Farmer.

EXPERIMENTS WITH POTATOES.

MR. EDITOR:—I wish to give you the results of some experiments that I have tried in planting potatoes. I planted five rows, eight hills in a row; one row was large potatoes cut, two halves in a hill, yielding 44 lbs. 2 oz.; one row large, two quarters in a hill, 39 lbs. 2 oz.; one row small, two halves in a hill, 31 lbs. 2 oz.; one row small, whole, two in a hill, 30 lbs. 10 oz.; one row large, whole, one in a hill, 27 lbs. 2 oz. By this trial you will see that the large whole potatoes, with one in a hill, gave the lightest yield, and the two large halves in a hill, the heaviest; and that the two small halves gave a little better yield than the two whole ones. I think, as far as this experiment goes, it gives the preference to cut potatoes for seed.

I wish to say something more about potatoes, for the benefit of any one that raises them. The information that I wish to impart, I obtained in reading a communication published in your paper some time last spring, signed by an old English farmer. I followed his advice by cutting my potatoes and dipping them immediately in plaster, and planting them with the plaster side up, handling them lightly, to keep from knocking off the plaster. I planted a piece of land containing some four rods short of a fourth of an acre; the land was in a neighbor's field, and he planted potatoes the same day, each

side of mine, but his potatoes had no plaster on them. The result was that the plastered potatoes came up first, and continued to gain on the others through the season, and when dug there was some difference in the yield. My neighbor dug the same number of rows of his, that I had in my piece, and we measured them to ascertain the difference; he had thirty-eight bushels, and I had seventy-two! I think the experiment needs no comment; and I think, likewise, as the old English farmer did, that if you try it once, that you will never plant potatoes without the plaster.

Shelburne, Vt.

A SUBSCRIBER.

For the New England Farmer.

CULTURE OF ROOTS.

MR. BROWN:—Agreeably to my promise, I will now endeavor to give a concise account of my method of raising root crops, and the uses to which I have applied them. And perhaps it may be as well to give you my manner of sowing and cultivating the turnip crop, which I adopted the last season, although I have for many years raised a considerable amount of that crop, for a farmer with a moderate quantity of arable land, which will be the case, usually, in the hilly regions of New Hampshire. In the spring of 1855, I manured well one acre and five-eighths of ground, and planted the same with corn; at my last hoeing, I sowed my turnip seed broad-cast, after having plowed lightly between my corn rows. The time of sowing was some time during the first week in July. In the fall I harvested from that field one hundred and nine bushels of the soundest corn which I have seen for many years; and quite late, just before the ground froze, I gathered in my turnip crop from the one and five-eighths acres, which measured, as I stored them away in cellar, two hundred and twenty-six bushels. I had also, two cartloads of extra pumpkins on the same land. I had another small spot of ground measuring seventy-one square rods, which I sowed to wheat; that I harvested some time in the fore part of August, which when threshed, measured ten bushels of good wheat. Immediately after the wheat was cut I turned under the stubble, and after smoothing the ground, I mixed turnip seed with my grass seed, and sowed broad-cast. I sowed this small field on the 15th of August. I gave this piece of land a sprinkling of ashes at the time of sowing my last seed, and harvested from it seventy-four bushels of turnips, of the best quality that I ever saw, and they have been so considered by others who have used them for table use. My kind of turnip is the flat English. The principal use which I have made of my turnip crop, has been feed for my cattle; I think much of the crop for that purpose. I consider it a great saving of fodder, and I have had some very fine stock which I have exhibited in various fairs, and nearly all the extra keeping of the same has been turnips, which I cut with a root cutter. The grass seed sown with the turnips came up very even, and was, when small, just shaded enough to preserve the roots in a vigorous state, and when I last saw the grass before the snow fell, I thought it looked the best, and bid the fairest for a good crop the next season, of any which I ever have had. I think land seeded in this way, far better than to stock down in the spring with oats, which I find a very exhausting crop.

In the season of 1854, I found, toward the last of June, that I had a small portion of mowing land, which was so bound out, that there was no promise of a crop of hay; not even to be worth mowing. I plowed up ninety-two square rods of this land, and spread on it twelve loads of compost manure, about the 12th day of July. On the 25th day of July, "wet or dry," I sowed my turnip seed; and harvested from that field three hundred bushels of turnips. I mixed my grass seed with the turnip seed as above stated. Last haying season, I cut the finest crop of herds grass, on the same land which I have ever had from any other method of stocking down. The quantity of turnip seed sown by me is at the rate of one pound to an acre. I have now gone into a greater length than I intended; but it is at your election to use as much of the above as you may think proper, and in such a manner as you may please.

JOSIAH BENNETT.

Westmoreland, N. H., 1856.

REMARKS.—Mr. Bennett presented some very large and fine cattle at the national exhibition last fall, and imputed their superiority mainly to their being fed upon roots. We are glad he has given his testimony in favor of roots as profitable feed for neat stock.

CATAWISSA RASPBERRY.

The Catawissa Raspberry is a native variety, entirely, grown and sold by Joshua Pierce, at Linnean Hill Nursery, near Washington, D. C., and entirely new and distinct in its characteristics in respect to the manner of bearing, and the periods of maturing its fruit, which promise to render it an object of general cultivation. From its appearance and mode of growth, I have no doubt but it is a seedling produced from the common wild black raspberry of the country, which grows in great abundance about the regions where it originated; nor can I lean that any other varieties, native or foreign, wild or cultivated, ever grew near the original plant, except, perhaps, the Thimble Berry, (*Rubus purpurea*, or *odorata*), which from the dissimilarity of the two, I do not suppose had anything to do with its production.

This bountiful gift of nature originated in the grave-yard of the little Quaker meeting-house, in the village of Catawissa, Columbia county, Penn., situated near the confluence of a stream of the same name with that noble river, the Susquehanna. The history of its discovery is simply as follows: The person who had the care of the meeting-house, from whose own lips I received the account, was in the habit of mowing the grass in the grave-yard, several times in the course of the year; and on one occasion, some eight or ten years since, observing that a brier, which he had often clipped with his scythe, showed symptoms of bearing fruit out of the ordinary season. For this time he spared the plant, bestowing upon it watchful care, and afterwards removed it to his garden.

The fruit is of medium size, inferior to many of the new, popular varieties, but is sufficiently large for all economical purposes. Its color is dark-red-dish purple, when ripe, and is of a very high flavor. It bears most abundantly throughout the season after the young wood on which it produces its best fruit attains a height of four or five feet, usually be-

ginning to ripen early in August, but sometimes sooner. The fruit is produced on branches continually pushing out from all parts, successively appearing in its various stages of growth, from the blossom to perfect maturity; and often there may be counted more than fifty fruits on a single branch. As the fruit on each branch successively ripens, the later ones diminish in size, but there is no suspension of its fruiting until checked by frost. If protected in-doors, it undoubtedly would produce fruit during the winter months.

The Catawissa Raspberry is offered to the fruit-growers as a grand desideratum which should be in the possession of every one who has the means of cultivating even half a dozen plants. It is not expected that it will compete with many other sorts, as a general crop at the ordinary season of raspberries; its time of ripening and its great productiveness are the qualities for which it is particularly recommended; producing its fruit on the young growth of each year, it is in its fall crop entirely exempt from the effects of spring frost, so often destructive to many of our fall fruits, in which case, it offers a valuable substitute for such as may fail, both as a desert at hand for present use, and various economical uses as a preserve for winter.

In its cultivation, deep plowing, or trenching the ground before planting, will be found advantageous. It should be planted in rows six feet apart, and at least four feet in the rows. The plow and cultivator should be freely used to keep the ground loose, and to keep down weeds or grass. The bushes may then be tied up to stakes or trellises, as with grape vines; and as it is desirable to a good fall crop, the old stalks should be cut away in winter or spring, to promote the rapid growth of the young wood.

U. S. AGRICULTURAL SOCIETY.

We have the Journal of this Society for the year 1855, before us, and it is more valuable than any that has preceded it, in every respect—in spirit, matter, and typographical and artistic execution. It is illustrated, first, by one of the most graphic, life-like, and beautiful lithographs of the grounds and structures, with all their animated beings, that we have ever seen. The view includes some of the surrounding buildings of the city, a portion of the shipping in the harbor, the rich foliage of the trees and the adjacent hills. Then comes the address of the President at the annual meeting in Feb. 28, at Washington, giving a rapid, yet clear history of the transactions of the Society, for the year, with appropriate reflections on the present condition of American agriculture. The business of the annual meeting is then given, such as choice of officers, &c., and then follows, a history of the *Third Exhibition of the Society*, held at Boston, in October last. This is illustrated with elegant specimens of the Short Horn and Jersey breeds of cattle, of South-down sheep, and the Essex, Berkshire and Suffolk swine.

The account of the Banquet, containing the Invocation, Thanks, President WILDER's Address, and speeches and sentiments, would make an interest-

ing and instructive volume, in itself. The Journal, (as well as the transactions which it records) is a credit to the genius and perseverance which devised and executed the whole, and is a crowning glory to the operations of the year.

We are glad to see institutions of all sorts, even of the most primary character, established to promote the interests of the Farm. The village farmers' club is unquestionably the true starting point,—and like the fishery for those who are to stand on the quarter-deck,—qualifies those who are to conduct others into more difficult and important regions of the Art. These men will be active and efficient in the County Societies, and will become those who are to act with wisdom and foresight, in an Association which recognizes the interests of the Nation.

The next exhibition of the U. S. Society is to be held in Philadelphia in October next, and the same untiring energy which carried the last exhibition to such brilliant results, will be infused into the next. But the responsibilities of such an enterprise are more than should be demanded of one person—the Vice President of each State (as well as all committees) should stand ready to co-operate with the President, and second his efforts in every possible way. The experience, the zeal and indomitable energy of Col. WILDER, as the controlling head, will accomplish much, but that will not exonerate others from the discharge of a fair share of the labor to be employed.

For the New England Farmer.

HORSES AT CATTLE SHOWS.

MR. EDITOR:—I read with much interest your valuable paper, and have been a subscriber for a long time, and look forward with much pleasure to the close of each week which brings to my door a new number; and as you remark after the article signed "Middlesex," on "Horse-racing at Cattle Shows," "that there is a diversity of opinion on the subject," and also expressed your willingness to yield room for discussion on the matter, I have written, not to take issue against my friend from Newton Centre, for I agree with him in part, but to offer my little mite to the many valuable articles in your columns, hoping it may interest some of your readers. Although there may be truth in the remarks of my friend, I cannot see why the strength, the power and the speed of horses may not, with propriety, as well be tried at our agricultural fairs, as the products of the farm in other particulars. I cannot see the objection to exhibiting, or the driving of horses at our fairs. We must have speed and strength in the animals on the farm to make them useful. Why not? As the age progresses, man progresses; the farmer desires a stronger and better team of horses,—he wants, or ought to want, a horse of all work,—one that will carry his load to mill or to church and not stumble by the way-side; he also wishes, or ought to wish for an animal which will carry him to market before market hours are over, or to the village sanctuary before the benediction is pronounced, and if they be but four or five miles

distant, he ought to be carried there in a shorter space of time than three or four hours, and to do this, my friend must give up in a measure his antiquated ideas, and join in a degree the young America school, (I do not mean politically speaking.)

How is this to be done? Must we pay the same and no more attention than our fathers and grandfathers did to their stock? raise the same breed of cows, hogs and horses as they did? Or shall we improve our stock? Shall we, because they thought that \$100 for a horse was a large figure, be satisfied? Surely not. Now, Mr. Editor, I do not see why a spirit of emulation ought not to exist, just as well among the breeders of horses, as in the raisers of butter or hogs. Can we not have the horse, the noble horse, represented at our fairs? Who wants, unless it be the sluggard, a slow horse, either for the plow, the harrow or the carriage? There are men, and those of high respectability, among us, who have been at great expense to introduce a breed of horses that shall excel in their various callings. They have presented at our fairs the draft horse, the strong, powerfully framed animal, capable of much labor, he is certainly useful, in his way; his strength and his good qualities have been shown at our exhibitions, and why cannot the roadster have his place? surely his duties ought not to be overlooked. We ought and must have, to meet the demand of a certain and by no means a disreputable class of men, the horse of speed and bottom, style him what you may, a fast horse, or the horse of endurance, and how can his qualities be tested, (any better than my friend's butter,) unless it be at public fairs? If one has a horse, such an one as is called by a friend of mine, and a good agriculturist, "the gentleman's powerful roadster, that can go his thirteen miles within the hour," we are at once asked by the buyer, and the very first question in such sales invariably is, "How fast is he?"

Now, I say, we must have such horses, and I cannot see why my friend from Newton cannot allow us, who love the horse as dearly as he loves his hogs, to have a place for our horses at the fairs. I am sure that the greatest and most beautiful attraction, and the one that drew and interested by far the most people of all sexes, all professions and trades, was the magnificent display of horses at the late United States Agricultural Fair at Boston. I will venture to say that where any other part of the exhibition was amusing to ten persons, the lovers of the horse were ten times that number. I for one, am anxious to have everything relative to the farm, be it in the way of horses or of butter, well and properly represented, each and all in their respective places, and have the privilege granted to all to follow their own inclination in visiting every part of the exhibition, and not be confined to any particular branch. I will agree to furnish one hundred persons that would pay their half-dollar to visit an exhibition of horses, where my friend from Newton Centre would obtain ten at 12½ cents each, to visit his dairy, (not to speak disparagingly.) I have written these rough ideas as they have suggested themselves to me, and trust my friend would not desire me so cruel a wish that I might be deprived of his nice tasting and without doubt elegant looking butter, just because I am so fond of that beautiful animal, the horse.

ESSEX.

☞ Tart words make no friends: a spoonful of honey will catch more flies than a gallon of vinegar.

EXTRACTS AND REPLIES.

SUNFLOWER SEEDS FOR OIL.

Will it be convenient in some future number of your paper to give information as to the best manner of getting the oil from the sunflower in a pure state, that it may supply the place of our bad whale oil for lamps? I understand, from what I have read respecting this plant, the oil is equal to the best Florence or olive oil, and yields, some say 50, some 70 gallons per acre; while the stalks afford good fuel.

This plant has been much neglected, but I am persuaded it is worthy of culture, especially at this time, as we can hardly hope to see the best sperm oil come into common use again. We do not think either, how much fertilizing ashes might be had, if the stalks of this plant were used so freely as they might be, if we were accustomed to grow it.

Yours, respectfully, G. P. S.

Byfield, 1856.

REMARKS.—An acre of sunflowers, one foot apart each way, will contain 45,560 plants. We find it stated that an average product would be fifty bushels of the seed and fifty gallons of oil. The oil is said to be excellent for table use, for burning in lamps, and for making soaps. The refuse of the seeds after the oil has been expressed, will produce 1500 lbs., and the stalks when burnt for alkali, will give ten per cent. of potash. It would require a powerful press to extract the oil, but such an one would soon be found.

STUMP MACHINE—LIQUID MANURE.

MR. EDITOR:—I once saw a description of a stump machine that pulled the stump by a screw, and cost only twenty or twenty-five dollars. Can you tell me anything in regard to such a machine. (a.) Would you recommend farmers to adopt the plan of using liquid manure as recommended by "T. C.", in *Farmer* Feb. 23? As this matter is quite new here, I wish more light in regard to it. With what should the tank be filled after the liquid is drawn off, and how often should the liquid be applied to the soil? Should the tank be built entirely under ground, or only level with the ground so as to be easily opened? Can they be made *water-tight* in the manner described by T. C.? S. G. BUTLER.

Essex, Vt., 1856.

REMARKS.—The farmer must be governed in his operations by the same laws which govern the manufacturer, the merchant, or commercial man; by the circumstances with which he is surrounded and the capital which he can control. If a proper investment in the farm, or implements and stock, absorbs all his capital, we certainly should not advise him to risk a large outlay in the fixtures and conveniences for liquid manuring, unless he possesses a remarkably enterprising spirit, and means to give farming his entire attention. We are far from believing in Dr. Beecher's theory, that the farmer should never incur a debt.

But there is a way to begin the good work, which is open to all.

In a convenient spot, near the buildings, make a

cistern in the ground, four feet wide, six feet long and eight feet deep, in the clear; stone, or brick it if preferred, though on firm earth it will answer all purposes cemented directly on the ground itself. A good way is to begin by laying a wall on the *surface of the ground*, eight to twelve inches high on each side of the tank, leaving the precise dimensions desired. Let the stones have a face inside, and level the top to receive the plank which is to cover it. Cement the joints of the wall, and then turf over the outside. Then excavate the inside, being careful not to disturb the wall. Into this cistern, conduct the sink water, and over it set the privy; in the other end set a stout pump stock, and the cistern is complete. It would also be well to conduct the water from the roofs of the house into it at will.—The cistern would be stronger if made round, instead of square or oblong. The pump should be made of inch boards, and about six inches square.

Here, then, is a receptacle for all sorts of cast-off stuff; nothing of a perishable nature can hardly come amiss. During a portion of the year liquid contents may be applied directly to the fields, by the aid of a cask mounted on wheels. Then, as an adjunct, there should always be a hollow square of meadow muck close by to receive the contents of the cistern when it is too thick to be pumped out, or when it is not convenient to distribute it on the fields, or in the winter.

If the odor should not be so much like that from a bed of mignonette as you would like, dissolve a few pounds of copperas in plenty of water and stir that in with it, when you will be able to proceed pleasantly.

RED CEDAR SEED.

Can you tell me where I can procure the Red Cedar seeds, and the amount it requires to sow fifty rods? When will be the best time to sow it, and how? How much will it cost?

I was led to inquire by seeing an account in your paper a few weeks ago, by Mr. Sheldon. He says it will make a good fence. A SUBSCRIBER.

Manchester, N. H., 1856.

REMARKS.—We have not the information desired. Will Mr. Sheldon, or some other person, impart it?

HOW TO MAKE NICE BUTTER.

MR. EDITOR:—Being a farmer's wife, and a constant reader of your paper, I take this opportunity of making a few remarks on the art of butter-making, during the winter season in particular.

In the first place, my milk is put into six quart pans, about two quarts in each pan. These are placed in my pantry, on shelves about twelve inches wide, leaving an open space through the shelves of four inches. There it is kept at a moderate heat through the day; then it is carefully placed over a kettle of hot water, or on top of the stove, until it is brought to a heat about one-third above that when taken from the cow; it is then removed to its former place, where it remains until the next

night, when the cream has risen sufficient to take off. Great care should be taken not to allow it to become too much heated, as the quantity of cream will be much less when ready for churning; to one pailful of cream, add four quarts of new milk, which in addition to the above method, will give a taste and flavor far surpassing that of the best made June butter.

I likewise contend that one-third more of butter from the same quantity of milk can be made from the above method than any other way.

A LOVER OF BUTTER MAKING.

C——n, N. H.

WHAT MANURE FOR PASTURES?

MR. EDITOR:—I have ten acres of new ground, rather light soil, descending to the east, one quarter of the surface covered with large rocks and ledges. This is seeded with timothy and red-top, and sowed with rye in September, 1854, and clover seed in the spring of 1855. I intend it for pasture.—What shall I put on to improve the land, and the amount of feed? If plaster, how much per acre, or if any of the fertilizers of the day, how much per acre?

C. W.

Indian Orchard, 1856.

REMARKS.—Apply ashes, if you can get it for anything less than twenty cents a bushel, or leached ashes for twelve cents. Plaster sometimes has a good effect. Sow, when the dew is on, four to six bushels an acre. Try an eighth of an acre with guano, and another eighth with superphosphate of lime, and note the results. No one is competent to tell what the result will be.

HOW TO USE STRAW—ASHES—CLOVER SEED.

MR. EDITOR:—I wish to have your judgment, or that of some of your correspondents, as to the best way to dispose of straw. I have eight or ten tons, and wish to make some disposition of it this spring. What effect would it have to burn the straw on the land before sowing? (a.) I have heard of scattering potatoes on grass land and covering them with straw; would that be profitable? (b.) How would it do to plow it in deep? (c.) Also the best and most profitable way to use dry unleached ashes, on dry loamy or gravelly soil? (d.) Is it best to sow timothy in the spring or fall? Will it answer to sow clover seed in the fall, if so, at what time? (e.)

I have running water to my barn, caused by a force pump, and wish to know how I can firmly attach the lead pipe to the socket snout, or nose, of the pump, so that it can be easily removed? (f.) I have done it with a hose wound with a strong cord, but it bursts frequently.

Is sour milk injurious or beneficial to cows, if injurious why? By answering the above you will much oblige,

E. KINGSBERRY.

Derby, March, 1856.

REMARKS.—(a.) There would undoubtedly be great loss in burning straw on the land, because all its volatile matter would be dissipated into the air. The straw, plowed under, would supply a large amount of vegetable matter, or humus, to the soil, which would be highly valuable. We would recommend this course as an experiment; throw the

straw into heaps near, or on, the field to be plowed; the spring rains will probably wet it through; then, just before plowing, spread on to the land as much as can be plowed under in half a day, so as to get it under in a wet state. If it is found difficult to get the straw under with the plow, throw it upon a cart, follow the plow and deposit in the furrow to be covered by the next furrow slice. This process may be a slow one, but worthy of an experiment.

When buried in the soil in a dry state, straw decomposes slowly, and produces a less sensible effect upon the succeeding crop, therefore, if a quick return from it is desired, it should be saturated with the water of the barn cellar or yard.

(b.) It is doubtful whether a paying crop would be obtained by covering the potatoes with straw on grass land. Try it, on a rod square.

(c.) To plow the straw in seven or eight inches deep, is, we think, the true course, and one from which important results may be realized.

(d.) Ashes, like barn-yard dung, is a standard manure. It is a universal panacea. Spread it broadcast and harrow lightly.

(e.) Young clover, from seed sown in the fall, is apt to winter-kill. Sow it in March—if on the snow it is as well, and then you can see the seed and sow evenly. Timothy seed may be sown in April, May, or in July, August and September. Some persons seed down grass land in October, but as a general thing, it is too late.

(f.) Some person better skilled in "pipe laying" than ourselves, must answer this query; and also the one in regard to sour milk fed to cows. But sour milk is excellent for pigs—why not let them have it?

ODD YEAR APPLES.

MR. BROWN:—Enclosed you will find communications from gentlemen who have in their orchards what we consider the very choicest variety of apples, with the addition of being odd year bearers. I have felt so much interested in this fruit that I have procured of Mr. Thorp some specimens from his tree, which I herewith present to you, and if your opinion should be favorable, I trust you will make it known.

You can judge of the interest I take in this fruit from the fact that of over one thousand trees which I have within a few years set out for orcharding, the largest portion are of this variety.

South Hadley, 1856.

CHARLES EASTMAN.

REMARKS.—The apples did not reach us in perfect order. They appeared much like the Baldwin. Mr. Eastman's opinion came strongly backed by that of several other gentlemen who know the fruit.

GUANO AND PLASTER.

JOHN H. SAUNDERS, *South Berwick, Me.*, informs us that he mixes guano and plaster, equal parts, and applies a large table-spoonful to the hill, and has found it to increase the corn and potato crops finely.

THE BLACKBERRY.

The common blackberry which is found growing wild in the fields and pastures of New England, is a fruit susceptible of easy and profitable cultivation. In its season, few of our berries are superior to this. It is a universal favorite, and always meets with a ready market, and at a price highly remunerative, as it costs less than the strawberry or raspberry.

In order to succeed in the cultivation of it, care must be taken to secure good and healthy bushes for transplanting, and to set them in good soil. By the term "good soil," we desire to be understood as indicating a quality of land similar in its physical character to that from which the bushes were taken. A soil of a sabulous or sandy character is the most congenial to the blackberry, and should be filled with old, well decomposed compost, into which forest mould and leaves enter as ingredients. Charcoal, finely pulverized, and wood ashes, leached or unleached, make an excellent top-dressing for the beds. If these stimulating substances are applied in sufficient quantity, there will be but little trouble experienced in securing a good and abundant crop of fruit.

But the blackberry plant, like many others, attempts to do too much. It will blossom profusely, and set three or four times as much fruit as it can perfect. As soon, therefore, as the blossom leaves begin to fall, trim out with the scissors, half or two-thirds of the fruit, or according to the amount which has set. We failed in obtaining a crop, for two or three years before we learned this lesson; but since we have thinned, have always obtained a crop.

For the New England Farmer.

A FEW WORDS ABOUT PEARS.

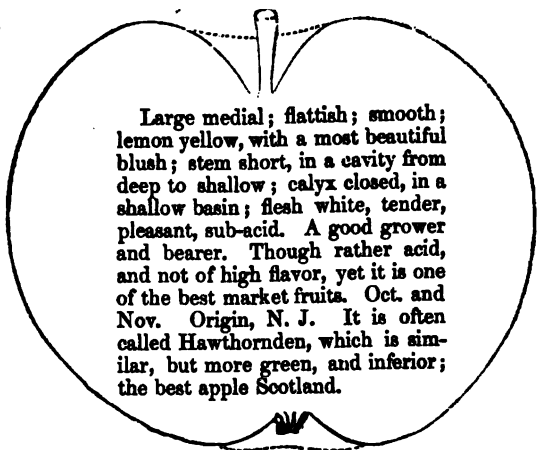
In Barry's *Fruit Garden*,—a work all fruit cultivators should have—on page 81 are the following remarks:

"*Double Working*.—When we graft or bud a tree already budded or grafted, we call it 'double-worked.' Certain very important advantages are gained by it. Some varieties are of such feeble growth, that it is impossible to make good trees of them in the ordinary way of working on common stocks. In such cases we use worked trees of strong growing sorts as stocks for them."

"A great many improvements may be effected, not only in the form and growth of trees, but in the quality of the fruit, by double-working. Very few experiments have yet been made on the subject in this country, except from necessity; but the general interest now felt on all matters pertaining to fruit tree culture, cannot fail to direct attention to this and similar matters, that have heretofore, in a great measure, been overlooked."

I have been cultivating, quite extensively, for a

MAIDEN'S BLUSH APPLE.



Large medial; flattish; smooth; lemon yellow, with a most beautiful blush; stem short, in a cavity from deep to shallow; calyx closed, in a shallow basin; flesh white, tender, pleasant, sub-acid. A good grower and bearer. Though rather acid, and not of high flavor, yet it is one of the best market fruits. Oct. and Nov. Origin, N. J. It is often called Hawthorned, which is similar, but more green, and inferior; the best apple Scotland.

few years past, a pear I think admirably adapted as a stock, for the purpose above mentioned of "double-working." This pear is quite common in this neighborhood. I have seen it in various parts of the country, grafted on old trees, but have never seen any young trees of this variety for sale, or growing in any nursery except my own. It may be, for aught I know a well known old variety. It is an abundant bearer, ripe early in August, of medium size, keeps but a short time, and would be considered, by most people, a very good pear. It finds a ready sale at good prices in the market here, under various names, as the "August pear," "Sugar pear," "Jargonelle," &c. I have adopted the latter title though at the risk of a little confusion, and advertise and sell it under the name of "Jargonelle."

I am much interested in the cultivation of the pear, and have been experimenting for a few years past with nearly one hundred varieties, very few of which I find perfectly hardy here. Many, even those having the highest recommendations, I find exceedingly difficult to raise from the ground. I think the main trouble lies in the injury the young wood receives during winter, which causes a stunted growth the ensuing season.

The pear referred to above, far surpasses all others in my collection for its wonderfully strong and vigorous growth, and its freedom from injury during the winter, and from blight of all kinds; never fails when transplanted, to live and grow well in all soils and situations, succeeding perfectly where many esteemed varieties entirely fail. It makes the finest looking tree in the nursery, remarkable for its upright, handsome and symmetrical form, with its hard and stocky wood. I have great confidence it will prove exceedingly valuable for a stock on which to work varieties of slow growth and difficult to raise. In fact, I do not think I have a pear in my collection, of which if an orchard was planted, I should not be a gainer by double-working on the "Jargonelle." That is, for orchard or even garden cultivation, set out the Jargonelle, and let them grow until well established, and graft from time to time, with varieties deemed most advisable. I have not, as yet, practised this method much, but intend to on an extensive scale, and in re-grafting, I should retain all of the stock I could. I grafted the Seckel on a young tree of the Jargonelle three or four

years after it was taken from the nursery rows, and obtained fruit the third year.

The Beurre d'Amalis is the next best grower I have, and very hardy. The Flemish Beauty I find perfectly hardy, and a fair grower. This, I think, will prove one of, if not the very best pear for general cultivation in the north of New England. The St. Ghislain grows well and is perfectly hardy. The Urbaniste, a variety of slow growth, tardy in coming into bearing, but wonderfully hardy; have never seen a single twig a particle injured by the winter. The Rostiezer is a very fine, promising, early variety, succeeding first rate with me.

I am preparing to go somewhat extensively into the cultivation of the pear on its own roots, and shall devote my attention mainly to those kinds I find by experience to be perfectly hardy and adapted to the wants of a severe climate.

See advertisement in another part of this paper.
Wakefield, N. H., April 1. JOHN COPP.

For the New England Farmer.

CIRCUMSTANCES ALTER CASES.

BY HENRY F. FRENCH.

How to apply Manure—Composting—Some Elements of Fertility Evaporate and others Sink—Deep Plowing—Seeding to Grass in Autumn—Sod and Subsoil Plow—Plowing Orchards—Distinction between Rules and Principles.

In a former article, I proposed to apply the idea suggested in the above caption, to the subjects of the application of manures, and of composting and deep plowing.

Shall I plow in the manure as deep as possible, or shall I leave it near the surface? Shall I compost it with mud or soil, and work it over to make it fine, or use it in a fresh and green state? The answers to these questions depend on circumstances, many and various. If you have a heap of common barn manure, and are ready to apply it this spring to your land for corn or potatoes, my advice would be, to mix nothing with it, but to spread it, and plow it in as deep as the plow will cover it, running to the depth to which the land has been usually plowed. As a general rule this would be the true method, but if the land be a stiff clay, for reasons which will be presently stated, the manure would be more profitably applied nearer the surface. The common manures consist of various elements, some of which are readily converted into gas and fly off into the air, and others which are not volatile, but are dissolved by water and carried away into the streams or into the ground.

A large proportion of the value of common manures consists of ammonia, which is always produced in the process of decay and putrefaction, and is very volatile, and is diffused at once into the air, when set free, and so benefits the world in general, as much as the original owner.

Another proportion consists of lime in various forms, and of potash, soda, and common salt.—These are inclined to sink into the soil, and to pass off below, unless taken up by the plants growing

there, or combined with other substances which retain them.

Where lime is used in large quantities, its effects are not considered permanent, but in a few years it is washed out of the soil, and it becomes necessary to repeat the application. This is well understood in the old countries. So it is said that common salt may be applied in sufficient quantity to land to destroy all vegetation, and that its effects will not last beyond the third year.

If, therefore, we place the manure near the bottom of the furrow for a hoed crop, we save all the ammonia, which rises and is incorporated with the soil, and the roots of our crop extend low enough to find the other elements, which would otherwise slowly pass downwards by solution in water.

Clay, or alumina, has a strong attraction or affinity for ammonia, which it absorbs from the manure and even from the air, and retains for the use of vegetation.

Hence, upon a clay soil, manure, though covered but lightly, will not lose its ammonia, and the parts which naturally sink are better protected near the surface.

Formerly my own practice was to plow all manure into the soil, as deep as possible, but if it be fine enough not to obstruct the convenient tillage of my crops, I, in general, now prefer to keep it near the surface. In laying swamps, and clay lands to grass in autumn, I prefer to use fine compost manure, and to apply it to the surface, merely harrowing it in.

COMPOSTING.

As to *Composting*,—this depends on circumstances. For market gardening, much of the manure must be fine, or it will render a proper culture of the soil about the young plants, impossible, and so, in all cases, where it is desirable to produce an immediate effect, manure finely divided, and thoroughly decomposed, furnishes more ready food for the plant. Again, highly concentrated manures, like night-soil, require to be finely divided, or composted, that they may not prove too powerful and that they may be equally diffused. Where top-dressing is used, it is an extravagant waste to apply fresh manure, because the most valuable portion of it passes off into the air, whereas if thoroughly mixed with clay or swamp mud, charcoal, or anything else which will retain the ammonia, the loss will be slight.

Again, where we have swamp-mud which contains in itself elements of fertility, in a form which needs but the addition usually of this very substance, ammonia, which is always endeavoring to escape, to render it a valuable manure, we make a double gain by mixing it with the manure because we save the ammonia which would otherwise escape, and we convert the mud itself into a valuable fertilizer. If the mud can be added daily or weekly to the ac-

cumulating heap in the barn cellar, this is perhaps the best use of it. The less a manure heap is handled over, in the open air, especially in windy days in Spring, the more of its value is retained.

DEEP PLOWING.

The *Depth of our Plowing* is another question, which must depend on many circumstances. I plow all my own land from eight to twelve inches deep. Much of it is sandy, and I manure heavily. The deeper such land is plowed, the better it will stand the drought, because the roots will strike the deeper, and on light soils, however much the manure may be diffused, the roots of the plant are sure to pursue and find it. On my heavy clay soil, in turning over the sod after haying—say once in half a dozen years—to exterminate the bad grasses and briars, which spring up after a few years, I am suspicious that I have usually plowed deeper than is profitable. In my next experiment, for which I am preparing a large compost heap of night soil and swamp mud, I propose to run the plow to the depth of about eight inches, apply the compost, harrow it well, and sow my seed in August, or early in September. On such land, which has a strong affinity for ammonia, there will be little loss by evaporation, and the young grass roots will find their food at hand for a start. In after life, much of their nourishment is derived from the air and water; and the heavier portions of the manure they will have time to seize upon, before it washes below their reach. For several years, I have used the sod and subsoil plow, and run it a foot deep, for my hoed crops; but upon a stiff clay, which had been plowed but five or six inches before, I should deem such an operation dangerous. A deep soil is desirable everywhere, but it must be deepened gradually, unless bountifully manured. In our rocky soil, it is often impossible to plow more than eight inches, though I believe it is well established that a *granite* subsoil, taken even from the bottom of a well, will become fertile merely by exposure to the air, so that on such soils, we have little danger to apprehend from deep cultivation.

PLOWING ORCHARDS.

Shall I plow my orchard deep? is a question often asked. My answer would be, plow it as deep as possible, and subsoil it before your trees are planted. After that, plow as deep as practicable, without cutting the roots of the trees. As they extend through the soil, plow more shoal, so as not to disturb them. I have no doubt trees are often injured, by this violent kind of root pruning. There are "circumstances" to be regarded as to the treatment of apple trees. On the old homestead at Chester, on the firm granite subsoil, an apple tree takes a hold of the earth that the elements themselves cannot unloose. The wind may break down the tree, but it cannot uproot it. On our

sandy land in Exeter, it is no uncommon thing to see a thrifty tree so loaded with apples, as to actually be weighed down, and its roots drawn from their bed, on one side. The root, in a deep, fine soil, with no surer foundation than sand for twenty feet below, can find nothing of sufficient substance to which to attach itself. Now in the first case, the earth may be kept as light as possible by frequent forking, and deep tillage. In the latter case, the soil is fine and porous enough, without artificial aid, and if manure be applied, and merely covered, and the land be occasionally laid to grass for a year or two, *provided it be kept always rich*, the trees will be the better for the treatment.

General Rules for the treatment of all soils, cannot be given. General Principles, to be applied by the aid of common sense, may be learned by all who seek for them in the proper direction. Until the distinction between rules and principles is better understood, we shall continue to have those, whom even braying in a mortar will not cure of braying in another sense, complaining that the teachings of scientific agriculturists are inconsistent.

For the New England Farmer.

SWEET APPLES.

The cultivation of sweet apples has been too much neglected; they often command an extra price—especially the best winter varieties—and it is difficult to obtain them, even at that. Many persons prefer them, rather than the acid kinds, for the dessert, and for baking; they are altogether superior in sickness. As food for cattle, and other animals, they are especially valuable. It may be said that horses or cattle have sometimes broken into orchards and surfeited themselves, so as to cause their death, or serious injury, and the same may be said of the corn-field. Apples fed to stock daily, and in proper quantity, are no doubt beneficial, and are highly relished by them. An experienced farmer in this vicinity, formerly a member of Congress, informed me that he had tried the experiment of feeding swine with boiled sweet apples and potatoes, and that he never had better pork, or less difficulty in fattening it. There are superior kinds of sweet apples to be found in the catalogues, and none but those which rank as first rate should be selected for cultivation; among these are the Early Bough, Danvers Winter, Haskell and Orange Sweet, Tollman, Seaver and Ladies' Sweeting; the last mentioned is a New York variety, which is highly recommended, but may not have been sufficiently tested here. There are other kinds, as well as the above, which are of first quality, and one can select according to his fancy, always bearing in mind that the variety should be productive, the fruit first quality, and the tree hardy, and of vigorous growth. It is no more expensive to cultivate a tree which will produce from five to ten barrels of good fruit in a bearing year, than one which will yield but a single barrel, and that nearly worthless.

O. V. HILL.

☞ A negro carpenter was lately sold in Adams county, Miss., for \$3,700.

IMPROVEMENT OF STOCK.

Considerable has been said of late, of the *heretical notions* put forth in the Report on *Milch Cows*, in Essex County, 1855. Without presuming to be expert in these matters, we beg leave to call attention to the closing sentence of this report, which reads as follows, viz:—

“Whether cross breeding with imported stock—or a course of judicious selection for a series of years from one common stock, be they natives or nameless, or your well aiding the selection, by a system of constant care and nutritious food, will best accomplish the end in view, your committee express no opinion.”

Although the intelligent chairman of this committee prudently abstains from the expression of an opinion, no one can carefully analyze and compare the facts included in his report, (see abstract, p. 193—199,) without coming to the conclusion that his own judgment was in favor of “the common stock” of the country as the best basis of hope for improvement.

For the New England Farmer.

EXPERIMENTS WITH GUANO.

MR. EDITOR:—Dear Sir,—In your number of the 15th inst., is a statement purporting to be my experience in the use of Peruvian guano, which is far from my experience in practice. If it is not asking too much, you will oblige me by publishing this statement of my experience with the Peruvian guano.

In the spring of 1852, I purchased one ton of said guano for \$56 delivered. The land it was used upon was a gravelly pasture that was never manured, plowed in the fall and cross plowed in the spring. The guano was carted into the field in the sacks, and placed so as to be convenient for putting 300 pounds per acre, then emptied from the sacks into the furrows, or a smooth place, and mixed with about one-quarter earth, then sowed broadcast from a bag or basket, saving out the hard lumps; when mixing it with the earth, put the lumps in the sacks, and at some convenient time, place them upon a flat stone, and pound them fine with an axe or stone-hammer, and sow as above; nubs not larger than walnuts or chestnuts, will do no harm. Sow on still days, if damp weather, all the better, and harrow as fast as sowed, to keep the ammonia from escaping: then well brushed over with a good white birch bush, so arranged as to take a sweep 12 or 14 feet wide, which is preferable to a good roller. The second week in May, I planted the corn square, three and a half feet each way; then cultivated it both ways; it required but a little hoeing. Good judges estimated it to increase the crop at least fifteen bushels per acre, upon seven acres. We had a good opportunity of judging, as it was side by side with that which had no guano.

I also made an experiment on meadow lands, both wet and dry, by sowing broadcast 300 pounds per acre, and harrowed as before, and upon each side of said acre, plowed in fifteen loads of good stable manure. The land was equally good, and was planted and cultivated alike. The acre that was guanoed yielded from a quarter to a third more

than the manured, and was eight or ten days earlier. In the fall sowed to rye, and when harvested, the guanoed acre had the preference.

I have also mixed guano with a quarter earth, or one bushel plaster with 300 pounds guano, per acre, and sowed it as a top-dressing in the spring upon grass; sow in damp weather or before a rain. I have tried it upon wet, rich lands, and upon uplands poor and dry, with good success. Also, after taking off the first and second crop of hay, it has always paid.

In the spring of 1854, I purchased of Messrs. Allen & Co., of Springfield, the Peruvian guano, at \$53 per ton. Sowed one ton upon eight acres of gravelly pasture as above; cultivated as above, and it gave me 218 bushels good shelled corn; all that saw it judged that the guano increased the crop 100 bushels; the stalks sold for \$30, which would not have brought more than ten; the corn sold for \$110, so that the \$53 worth of guano, gave a profit of \$77. I am confident it produced more corn than \$100 worth of manure, to say nothing about drawing it one and a half miles. In the fall, sowed the above to rye, adding 150 pounds guano per acre; it more than doubled any previous crop, and gave fifty per cent. more grass, for feed, than ever before.

I also plowed in fifteen good cart loads of stable manure per acre, on seven acres of my meadow, some of it warm, some cold and heavy loam; sowed 150 pounds guano upon five acres of it, and bushed the whole, but did not harrow for fear of disturbing the manure; planted the corn the third week in May, three feet square, cut it up the first week in September, husked early in October, ripe and dry. Weighed the husked corn from the same number of hills upon one rod of each, and upon three different rods of each, and made an estimate of the number of hills to the acre, and allowing 74 pounds to the bushel, as it was very dry, and found the average increase per acre of the five acres that were guanoed, was 23 bushels, so that \$19.87 worth of guano gave an increase of 115 bushels good shelled corn, and it was eight or ten days earlier than the two acres that had no guano upon the land, just alike, and has been treated and cultivated alike for years.

Also sowed half a ton at the rate of from 100 to 150 pounds per acre. The drought affected some fields so that it would not more than pay for harvesting. It was so with mine where no guano was used, side by side, but where it was used, it had very little if any effect—all cultivated alike in raking to set it up; where the guano was it produced nine bunches to one on the same distance where there was no guano used, the straw was increased enough to pay for the guano—to say nothing of the berry which was very heavy and nice.

Last spring, 1855, plowed in fifteen cart loads of good stable manure per acre, on nine acres of warm river land. Then sowed 250 pounds guano per acre, and bushed it in with a bush harrow, as I call it. Planted the first week in May, the Dutton twelve-rowed yellow corn; fifteen years ago the ears were short; by selecting the best ears for seed, they have increased in length and size of the great twelve-rowed corn, that is late. Every hill came up and was healthy, and of a dark green color, and was even over the whole field. The first week in August the ears were suitable for boiling; cut it up the second week in September, and husked in Oc-

tober, perfectly ripe and dry. Good judges admit that the guano increased the crop at least twenty bushels per acre, and was ten or twelve days earlier for the guano; so that 1350 pounds guano gave an increase of 180 bushels corn. Upon one acre of the same field, sowed 300 pounds guano without any manure, harrowed and bushed it in, planted it same time and cultivated with the other—on harvesting, it was better every way than where it was manured and 150 pounds guano; showing plainly, that 300 pounds Peruvian guano will make more corn than 15 good loads good manure.

Also sowed one ton guano upon seven acres of poor pine plain land worn out. After plowing, as I prefer harrowing and bushing it in as it mixes it more suant in the earth, which is very important, and prevents the guano from injuring the crop, as I have never had any injured, always plowing seven or eight inches deep, planted the eight-rowed corn on the second day of May; all came up, though it was exposed to the crows; they did not pull it up, as it was planted from three to four inches deep, and patted with the hoe—when planted shallow the crows almost always pull it badly in this vicinity. Cut it up the second week in September, and husked in October. It produced

206 bushels shelled corn, ripe and dry, at \$1 per bush.....\$206,00
The stalks sold for.....26,00

Making.....\$231,00

Cost of growing crop:

Plowing.....\$14,00
Harrowing and bushing.....4,00
Sowing guano.....2,00
Planting corn.....8,50
Cultivating three times once in a row.....8,00
Very little hoeing three times.....8,00
Cutting up and stacking corn.....7,00
Husking and carting corn.....10,50
Interest and taxes on land.....4,20
Guano.....58,00
Thrashing corn.....4,00—\$116,20

Profit.....\$114,80

The last week of last June, sowed one ton of Peruvian guano upon fifteen acres of poor sandy white birch land, worth not more than \$6 per acre, and plowed but once about the first of June; sowed the buckwheat and guano as above, and harrowed and bushed them in together, cradled and set up the last week in September, carted into the barn before the fall rains in fine order; thrashed in the winter, as the straw was needed for bedding for stock; it is worth as much as any straw for bedding, and when cut before the frosts, cattle will eat it readily. It produced

208 bushels, of 52 pounds each, at 75 cts. per bush.....\$152,25
10 tons straw, at \$6 per ton.....60,00

Making.....\$212,25

Cost of growing crop:

Plowing.....\$15,00
10 bushels seed.....7,50
Sowing, harrowing and bushing.....7,00
Sowing guano.....2,00
Cradling and setting up.....9,00
Carting into barn.....12,00
Thrashing.....10,00
Interest and taxes.....6,75
Guano.....58,00—\$122,25

Profit.....\$90,00

The Peruvian guano does equally well with the potato crop; 300 pounds has given me more bushels of potatoes than 20 loads manure. Oats and spring wheat have proved equally successful. The

common turnip, 300 pounds on very poor land, gives a better crop than forty cart-loads of manure per acre.

Seeding with grass seed in August or September for mowing or pasturing, 300 pounds has made fine crops of hay. Turnips may be raised with the same, sowed with the grass seed. My experience from the experiments made proves that one ton of the genuine Peruvian guano will make more corn than one hundred loads of good manure, worth with us one dollar per load; and 300 pounds has always made more corn for me, than twenty loads of my best manure.

DAVID MOSLEY.

Westfield, March, 1856.

WAR WITH ENGLAND!

To the Selectmen of the town of Concord:

GENTLEMEN:—I have received—and herewith send you—from our brethren in the town of Coggeshall, in the county of Essex, England, an address to the inhabitants of this town, invoking their influence for the perpetuation of peace between this country and England.

It asserts strong fraternal feeling towards us and the American people at large.

It is enrolled on parchment. I hope it will be read to the persons assembled in Town-meeting to-day, and such action taken on it as may be deemed proper, and then placed among the records of a people who were the first to resist aggression, but who sympathize with the sentiments of the address, and who believe that war, however fiercely waged, can never settle difficulties between nations.

Very truly yours, SIMON BROWN.

TO GEORGE M. BROOKS,
SAMUEL STAPLES,
JOEL W. WALCOTT, Esqs., } Selectmen of the
Town of Concord, Mass.

Concord, April 7, 1856.

ADDRESS.

To our Brethren and Sisters, the Inhabitants of Concord, Massachusetts, U. S. The Address of the undersigned, Inhabitants of the Town of Coggeshall, Essex County, England:

It is impossible but that we regard with deep and unaffected anxiety any approach to a misunderstanding between the governments of the United States and of Great Britain; and the rumors of hostilities between the two nations have given us intense sorrow; we deeply regret that the influence of the Press in both countries should have tended to fan the spark into a flame; but we are devoutly thankful that the "God of Peace" has, by the more recent development of His providence, led us to believe that the gloomy forebodings which some of us entertained, will not now be realized, but that the amicable relations that have been so long maintained may continue undisturbed. Still we deem this a fitting opportunity to assert our fraternal feelings towards you, and our American brethren at large.

Friends and brethren, we hold the evils attendant upon war to be so tremendous, so unspeakably horrible and heart-rending—and believing that "God has made of one blood all nations of men," and that consequently all men are brethren, we would seek by all possible means to maintain peace. But there are strong special reasons why we should cultivate peace with the people of your land: Your ancestry is so truly noble, of which not merely England, but all Europe "was not worthy;" we

hold so much in common; we speak the same language; our literature is one; and for the most part our religion is one; bound by ties so solemn and tender, our alienation, for ever so short a time, we could not but regard as a fearful calamity.

Friends and brethren, accept this humble effort on our part towards the perpetuation of peace and good-will between us. May you be still more abundantly blessed by the Giver of all Good than you have yet been—and bright and great as have been the preceding ages of your country, may its future be even greater and brighter than the past.

Signed,

F. W. PATTISSON, *J. P. for Essex Co.,*
And 99 others.

On motion, a committee was raised to prepare and report a reply, which they did as follows:

The committee appointed to consider the subject of the address, report the following reply, and recommend that it be signed by the Town Clerk, the Selectmen, and such other citizens of the town as may find it convenient to do so, and that it be fairly transcribed and sent to the first signer of the Address.

To our Brethren of the Town of Coggeshall, Essex County, England:

We acknowledge the receipt of your late Address, asking us to exert whatever influence we may to perpetuate peace between Great Britain and the United States, and we accept it with pleasure.—Standing, as we do, on soil baptized with the blood of both nations, and that was once the theatre of war, we fully appreciate the sentiments you have expressed, and most earnestly desire that the bonds of union now so happily existing between us may never be broken; that both nations may remain not only the conservators of peace, but continue to cherish the arts of peace, the literature and religious freedom of which both have become such eminent examples.

It was the spirit of Peace which you invoke that settled this town without the shedding of blood, and which has enabled us to live in harmony and concord ever since.

We thank you for your kind thought of us, and trust that a common ancestry, a common literature and religion, together with the important commercial relations existing between us, and the highest civilization that the world has ever known, may keep us united in friendship and love, and convince us that War would be an unnecessary, as well as a fearful calamity.

In the spirit of Peace, therefore, and of fraternal regard, we return your friendly greetings.

SIMON BROWN,
E. R. HOAR, } *Committee.*
R. W. EMERSON, }

Concord, April 7, 1856.

OHIO AGRICULTURAL COLLEGE.—An institution has been incorporated under this name and put into successful operation at Cleveland, Ohio. Its design is to place within the reach of farmers, both old and young, the means of acquiring a thorough and practical acquaintance with all those branches of science which have direct relations to agriculture.

The plan of instruction consists in daily lectures, which embrace all the departments of agricultural

science; chemistry, in its applications to soils, manures, &c.; anatomy and physiology, with reference to feeding and breeding of stock; geology and mineralogy, and botany; natural philosophy, rural architecture, draining and farm-book-keeping, and the political economy and history of agriculture, are included in the plan. HARVEY RICE, President, and THOMAS BROWN, Editor of the *Ohio Farmer*, Secretary.

For the New England Farmer.

THE ORIOLE'S LAMENT.

Cairce, cairce, pip-pip-pee,
Where are ye, come, come to me;
Here I hung your cradle soft,
Safe on bough that waved aloft;
Here ye nestled 'neath my wing,
Here I nursed you in sweet spring.

Answer me, my fledglings dear,
Mother's call will ye not hear?
Summer's o'er, frost nips the rose,
Green leaves fade, the chill blast blows,
Autumn lowers, come, come a way,
To climes where shines a brighter day.

Cairce, cairce, hark ye, here am I,
Hither to me swiftly fly;
Long I've sought you mourning sore,
Grove and wildwood wandering o'er;
On your birth-tree last I light,
Ere my hope shall sink in night.

Late I carolled, blithe and gay,
'Mid the blooming trees of May;
Joined with warblers of the sky,
Recking nought of danger nigh—
Darlings sweet, your tender voice
Bade this swelling heart rejoice!

Now I sit, in sad October morn,
Robber fell has left my breast forlorn;
Man, thou spoiler, didst thou hear my lay,
Boon most free, and thus my trust betray,
Heeding not my wail, my dire alarm,
Pitying cry to save my brood from harm!

Ravished offspring, silent groves, farewell!
Winter's harp, thy dirge my grief shall tell;
Lonely, far I fly to southern skies,
Where may foes no more my peace surprise;
When sweet spring these northern climes shall greet,
May we hope, in man a friend to meet? J. L.

Salisbury, Conn.

For the New England Farmer.

WHEAT CULTURE IN MAINE.

MR. EDITOR:—Much has been said against this State as a wheat growing State, and the idea is becoming quite prevalent among many farmers that wheat cannot be profitably cultivated here. The farmers here contend that a very tenacious soil is required for the production of this grain, and consequently you see but very little wheat growing on light loams. Now that a tenacious soil is not best adapted to the cultivation of this grain I will not dispute, but that it cannot be successfully grown on light soils, I will attempt to dispute, for on such soils I experimented the past season with good results. Two years ago I purchased a farm which consisted mostly of what was called by the neighbors *weak land*, and had been under the scientific culture of an old sea captain for twenty years previous to my purchase. The land was completely

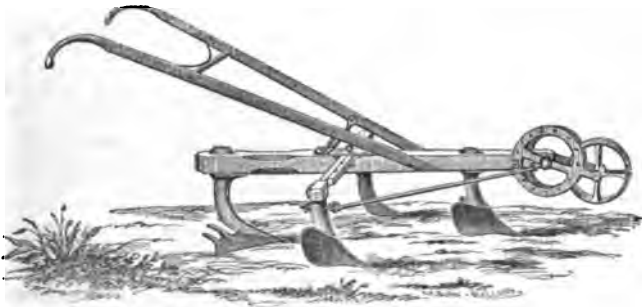
worn-out and exhausted from the fact that it never had been half cultivated. The land was very light but not sandy, and the captain said he could grow anything but wheat, and that would not pay in this State. The first year I put in a piece of wheat with very poor success, raising eight bushels from near an acre. The second year I had two acres of old ground which had never been manured. On this I carted near one hundred cartloads of swamp muck in the fall, distributing it in small heaps over the field. In the spring I spread it and plowed it in and sowed wheat. The spring was cold and backward, and from some cause it did not all germinate. After it came up I sowed on twenty bushels of refuse lime and as many more of ashes, the effect of which was soon perceivable. When it was ready to harvest, some of the straw was more than five feet high. I reaped it and it threshed out forty bushels, at the rate of twenty bushels to the acre. I think all light soils can be renovated by applying muck, ashes and lime, so that wheat, as well as other grains, will grow.

Searsmont, Maine.

J. M.

HOWE'S EXPANDING HORSE HOE.

There is really no limit to the genius and activity of mind; one improvement suggests another, and their union, or the adoption of the best ideas, has been of immense benefit to the farmer. They save a vast amount of human toil, while their results are even more valuable than though human hands and muscles had been doubled or trebled. A great advantage in a good machine is—and one not always thought of—that while it turns off so much more work than man alone could perform, it does not have to be warmed and fed.



In the cut above we have another, and a new view of that excellent implement, the Horse Hoe. It possesses some advantages over the one introduced three or four years since, in having *parallel expanding bars*, so that it may be worked as wide or as narrow as is desired. The side teeth are also supported by a rod connected with the front part of the hoe, thereby giving them permanency, and without any wearing of the socket that holds the tooth to the bar. The want of expansion was often felt in the old hoe. The implement is made in the most thorough manner, and the improvements are by Mr. JAMES A. HOWE, of Boston, a gentleman of a good deal of inventive genius and skill.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 9.

SOUTHERN COUNTIES—SURREY, HAMPSHIRE, DORSET, DEVONSHIRE, CORNWALL.

We now enter the county of Surrey. Rents should be about the same as in Sussex; for the soil naturally is not better. The southern portion of the county touches the Weald, and partakes of all its disadvantages. On the west, is another kind of barrenness, consisting of unsound moors, which farming has not yet everywhere ventured upon, because it would not pay the expenses of cultivation. As for the north and east of this county, London occupies it, with its environs and immense dependencies.

Surrey, therefore, is of no importance as an agricultural county; its large population is more urban than rural; and its area is only 450,000 acres. It is, however, the county most visited by strangers, and its beauty has always been celebrated. A few miles above London, the Thames is neither more nor less than a park river, whose clear waters, covered with swans, wind through green meadows, and under the shade of magnificent trees; its banks are studded with mansions and parks, interspersed with elegant villas, and pretty cottages; well-kept roads, running through this enchanting country, disclose its beauties at every turn.

Here you see the English taste for gardening—it is entirely rural. Indeed the taste of the English is pastoral; they are essentially agriculturists and sportsmen, even more than naval. Properly speaking, they have no woods, but trees scattered here and there, over large grass fields; and instead of foot-paths, they have roads; nothing artificial or having the appearance of arrangement—real country brought to perfection by the

freshness of the turf, the beauty of the trees and flocks, depth of horizons and happy distribution of water,—the useful and the pleasurable, in fact, united; art aspiring no further than to separate nature from its roughness and decay, in order to leave it adorned with all its loveliness and fruitfulness. The *undulating* character of the country, (the English love to apply sea terms to all things,) adds beauty to its perspectives. Such is

the appearance of the county of Surrey. And how much of New England might, and in time will wear the same aspect. It is not the soil that has wrought these wonders, because it is naturally arid in the high grounds, and marshy in the low; but labor and a pastoral taste. Even the commons, which are here and there to be met with, covered with their furze and broom and heather, by their wildness, add an agreeable variety to the view.

Hampshire comes next, continuing along the Southern coast, and is considered to be one of the most agreeable counties as a residence, on account of its mild and healthy climate. The Isle of Wight, where the Queen has her favorite residence, belongs to Hampshire.

Generally speaking, the soil is bad, especially towards the north. There was, formerly, an im-

mense moor here, known as Bagshot Heath. Several portions have been cleared, and others planted with pine trees, but most of it is in its original state. Moors again make their appearance towards the south, where there is a large forest, called the New Forest, made by William the Conqueror, who is said to have destroyed towns and villages that he might have it for a hunting ground. The New Forest covers 68,000 acres, and belongs to the crown.

The character of Hampshire, therefore, is a country of ancient forests and heather. The heather supplies food for a race of small but excellent sheep, known as Bagshot sheep. The oak forests, similar to those described in *Ivanhoe*, provide food in like manner for herds of swine, which furnish excellent bacon.

In the poorer districts of this country, single farms contain as much as 1000, 2000 and 3000 acres. In the southern part, they range from one hundred to five hundred acres. The large farms are almost entirely devoted to sheep, and the race has been greatly increased in numbers, though not improved in the quality of meat. The race of pigs is no longer that tall, active and strong race of former days; but one that fattens better and more quickly.

This county calls on me to say a few words on English trees. The existence of the New Forest is now threatened, on the ground that it might be advantageously parcelled out and sold, either for farms or parks. In England, the prejudice against clearing land is not great, because coal is abundant for fuel, and the rapid advance of population makes it necessary to look about for means for its support. But observe—the destruction of forests in England, does not imply the destruction of the large trees; far from it. If England has less wood than most other countries, she possesses more fine trees. Most of her counties present the aspect of a well-wooded country; but the trees are scattered among the hedgerows, in the parks, and along the roads. They are not packed together. At the same time, all lands, which are unfit for anything else, are planted. The art and taste for plantations are widely extended in England, and promise, in the future, to be a source of great wealth. To grow wheat on wheat lands, and timber on lands not suited for cultivation, and everywhere else to make use of trees as shelter and screens, as well as for ornamental purposes—to have, in fact, a sufficiency of trees without having too many of them, but to respect them and defend them—this is the English system, and a good one.

A place presented by the English nation to the Duke of Wellington, called *Strathfieldsaye*, lies in the north of Hampshire. It is one of those stiff, clay soils, so difficult to work. The duke laid out the whole rental upon improvements of all kinds—in draining, marling and farm offices—to little profit. Such an outlay on a less rebellious soil, would have given ten times the result; but the old soldier persevered in the struggle, considering it a point of honor as well as of duty, to be stronger than his land. He was much beloved by his tenants and neighbors, who profited by his liberality. He caused commodious and comfortable cottages to be erected for his laborers, with about two perches of garden ground attached to each—renting them at twenty-five cents a week, and taking his pay in labor.

Dorset is the next county to Hampshire, following the coast line. Here the aspect of the country changes. In place of the wooded hills and dales of Hampshire, we find extensive calcareous downs; bare, without trees or shelter of any kind; possessing a scanty population of about one to three acres, few habitations, few gentlemen's seats, very extensive farms; in point of agricultural wealth, rather inferior to Hampshire; but having a higher average rent. Most of the country is in pasture. Agricultural occupations are principally the rearing of sheep for the butcher, and the care of milch cows for the production of butter. Upon this poor and dried up soil, greatly resembling the Downs of Sussex, any other system of culture would probably fail. Turned to account in this way, the land affords an average rent of about five dollars the acre.

Mr. Huxtable, one of the boldest pioneers of English agriculture, resides in the county of Dorset. This gentleman was one of the first, after the repeal of the corn-laws, to assert the opinion—which he did in a pamphlet—that, even at low prices, English farmers could retrieve themselves, if they kept up their courage. One can imagine the storm such an assertion raised. Mr. Huxtable was treated as a public enemy, although himself a farmer, as well as rector of the parish of Sutton Waldron. He has two farms, upon which he put his theory to the proof. The one near Sutton Waldron is that upon which the distribution of liquid manure by subterranean pipes was first practiced. The other, containing 280 acres, lies upon a bare, calcareous hill, much exposed, and rising abruptly several hundred feet. It was, at one time, almost in a state of nature, but is now admirably cultivated, and all the new methods of culture are carried out upon it.

The two remaining Southern counties are mountainous, and of granite formation. Devonshire, which comes next to Dorset, is famous for the beauty of its scenery, and the mildness of its climate, and it is no less worthy of attention, in an agricultural point of view.

In no part of England, has irrigation been carried to a greater extent than in Devonshire. The streams, which run through granitic soils, are very fertilizing, and the land there lies very favorably for such works. It may be said that there is not a stream in all the county, however small, which is not collected and turned to account. The new breed of Devon cattle is justly reckoned one of the handsomest and most productive in Great Britain. It is below the average size; but for symmetry and for the excellence of its beef, there is no breed superior. The cows do not give much milk; but the quality of the butter made from it is celebrated. It is, in fact, butter and cream alone, which the numerous dairies of Devonshire supply. The cereal cultivation is very limited; the soil being more suitable for green crops. The country is covered with apple trees, from which much cider is made.

Cornwall is covered with a mass of barren mountains. Agriculture holds only the third place among the occupations and resources of the county. Tin and copper mining occupy a considerable portion of the people, and fishing another portion; and all that is to be said is, that the effects produced on such farming as there is in Cornwall, by the proximity of these industrial occupations, is very observable.

We have now travelled through the southern counties of England. I think every farmer, who

has read my sketch of them, and of their soil, will agree with me, that New England soil is not inferior to the soil we have travelled over, in these southern counties. We have been on Romney Marsh, and met the New Kent sheep; on the South Downs, and seen the South Down sheep on their native soil; among the mountains of Devonshire, and seen the New Devon cattle; among the heather of Hampshire, and seen the Bagshot sheep; we cannot find in New England but few (and those imported) such breeds of sheep and cattle, but a soil as good as that which sustains these breeds of animals, is abundant enough in New England. The soil of New England, then, will not prevent its equalling, at least, the southern counties of England, in agriculture; this is a fixed fact. Is it then a very vain imagination, that the day will come, when New England will have breeds of cattle and sheep, markets, labor and capital, such as will bring her agriculture up to English agriculture? It would not surprise me, if the child, and perhaps the man is now living, who will see Mr. Rigden's farm repeated in New England. And it would not surprise me if there were many a sturdy New England farmer who will not lose heart under the competition brought to his door from the rich lands of the West, more than Mr. Huxtable did, when the corn laws were repealed. Why should the New Englander lose heart more than Mr. Huxtable, when it costs nearly as much to carry a barrel of flour from New York city to the interior market, where the New Englander sells his produce, as it does to carry the same flour to the market where Mr. Huxtable sells his produce; there being now no duty in either case.

The course to be pursued in New England at present, appears to me to be this—to keep up the agricultural spirit and courage of the people, and the love of country life; to improve our breeds of sheep and cattle, and pigs and horses, and wait the time, not so distant as some think, when markets, developed by the growth of commerce and manufactures, and greater abundance of capital and labor, shall bring with them agricultural prosperity, and the marriage of farming and capital. Farther than this, our course is to demonstrate, if we can, and fix the conviction in the minds of farmers—if it be true—that success will crown the efforts of small proprietors, if farming be united with capital. The improvement in British agriculture has been through large farming; its origin has been aristocratic; we must show that success and improvement can attend farming by small proprietors; our improvement must be democratic in its origin, but accomplished by the aid of capital. No man is more capable of great exertion than the New England farmer; but to induce the exertion he must see he has the prospect of bettering his condition; whereas, now he too often looks for bettering his condition by spending the money he gets off the farm in investments off the farm, or by leaving the farm altogether.

M.

A KNOWING HORSE.—“E. M.,” of Belchertown, writes to the *Amherst Express* about a very intelligent horse, of which he is the owner. The following incident, among others, illustrates the matter:

“One day last week he was driven a few miles out of town, and on his return, some time in the af-

ternoon, was fed with meal and cut-feed as usual, but for his supper he had nothing but dry hay, which did not agree very well with his sense of right, after travelling twenty miles with a load through snow drifts. However, he kept his thoughts to himself till we were all out of the way for the night; then, sundering his rope in some way, he passed through the cow stable, crossed the barn floor and the carriage-room to the granary, at the further end of the barn, some forty feet, where he had often seen us get the meal for him; he there found two bags of meal standing by the bin, tied up tight, but the top one being too heavy for his purpose, he threw it aside, and after examining the other bag, which weighed between fifty and sixty pounds, he took it in his teeth, and carried it about twenty feet, to a clean spot on the barn floor. Finding it difficult to untie it, he cut a hole in the side and shook out about a peck of meal, and ate what he wished; and seeing the cow (the only companion he has these long winter nights) looking with a longing eye at his pile of meal, he took up the bag again, and carried it about ten feet further to her manger, and shook out some more meal for her. They were found in the morning feasting together.

For the New England Farmer.

GRAFTING THE GRAPE.

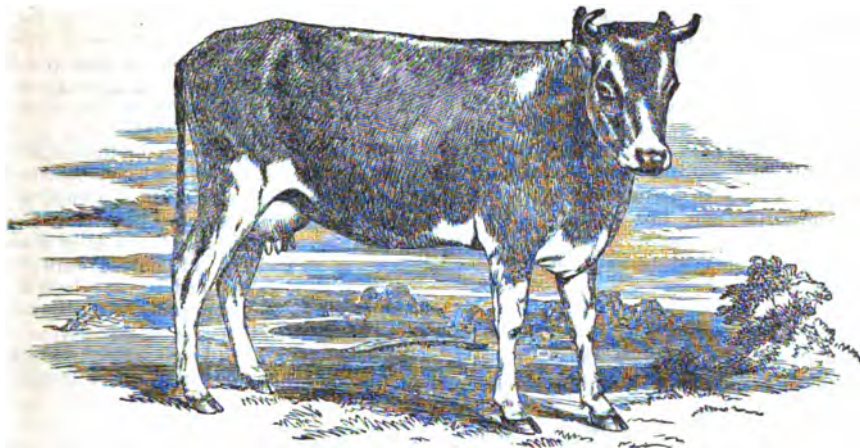
MR. BROWN:—From reading the queries and remarks in your paper of 29th ult., I feel disposed to tender my mite of information and experience to Mr. Farrar, and all would-be-grafters of the noble grape. I have grafted the grape vine with good success, and it always pains me to see one of these native vines, after becoming well established in the soil, ruthlessly dug up as a nuisance, simply for the want of a mite of information to enable its owner to change it to any (or even all) of the different varieties to be desired. In addition to Mr. Downing's remarks, I would say, that it is better to use Babbitt's grafting wax, as it facilitates the union between the stock and scion, and if put on with care (the same as in ordinary grafting) it prevents the stock from bleeding; so that one can graft them as early in the spring as the frost will permit, thereby securing a better growth and ripening of the wood, than if postponed till June. The grand secret of success is, in *keeping all sprouts from growing on the head or bulb* of the vine grafted. Generally, on a vine, where the roots and top unite, there is an enlargement, (which I call the head,) which is full of eyes, which are very ready to put forth and absorb the sap and supply the place of the old vine removed. As often as once a week I dig around the head of the vine, and remove all the sprouts, taking great care not to break the buds of the scions or disturb them in the least. I never leave but two buds on a scion, and cover them with fine earth, over which strew a little fine mulching, so that it will keep moist around the buds.

I hope Mr. F., and many others, will try the above, for I think they will be more than satisfied with the result.

READER.

Winchester, April, 1856.

Mr. Willis, of Orange, Mass., has sold the right of his “Improved Stump Extractor,” for the States of Wisconsin and Iowa, to a gentleman in Milwaukee, for \$8000.



AN ALDERNEY, OR JERSEY COW.

The Alderney cow, Flora, represented above, was exhibited and admired by the lovers of good stock, at the great exhibition in Boston, last fall. She was owned by G. H. FRENCH, Esq., of Andover, Mass., who also exhibited other excellent stock. The Alderney and Jerseys are bred on two islands off the coast of England, where no pains is spared to keep them pure. They are light red, yellow, dun or fawn-colored; short, wild-horned, deer-necked, thin, and small-boned, irregularly, but often very awkwardly shaped.

An English writer of emence says: "The Alderney, considering its voracious appetite—for it devours almost as much as a short-horn—yields very little milk. That milk, however, is of an extraordinary excellent quality, and gives more butter than can be obtained from the milk of any other cow. Of this no one can doubt who has possessed any Alderney cows. The milk of the Alderney cow fits her for the situation in which she is usually placed, and where the excellence of the article is regarded and not the expense; but it is not rich enough, yielding the small quantity that she does, to pay for what she costs."

THE STRIPED SQUIRREL.

In answer to your correspondent, F. H. Whitney, I would say that I live in New Hampshire, and very near the State of Massachusetts, and have been acquainted with the striped squirrel in both States; that his habits are all the same; and further, that if Mr. W. ever saw fresh dirt lay at the mouth of a hole, that there had been some other help at work that did not belong to the family of striped squirrels.

I presume that I have dug out more squirrels than ever he did, and I do not find his account of the manner of digging correct in one quarter of the instances. They dig according to circumstances in the soil and situation, frequently running along several feet on a level, and not more than six or eight inches below the surface. If anybody else ever sees a squirrel digging his hole and leaving the dirt at the mouth, I wish they would let me know it, as soon as possible, and I will pay them handsomely for the trouble.

B. F. CUTTER.

Pelham, N. H., Feb., 1856.

For the New England Farmer.

HORSES WITHOUT HAY—LICE ON CATTLE, &c.

MR. EDITOR:—Although not engaged in farming, still I am a constant and well entertained reader of your valuable paper, and feel highly interested in the subjects that fill its columns. In the number for March 15, I noticed an article on the use of corn-stalks as fodder, and the preference cattle have for those of the sweet corn, mentioned by Gen. Chandler, of Lexington, and which fact has been observed by others. But what I wish to say is, that one of my townsmen cuts yearly about six acres of stalks, with which he keeps five horses in good working order, dealing it to them finely cut, with the average quantity of cob meal. With regard to keeping on hay and grain, a friend of mine who has constant use for his horses in teaming on the road, says he keeps them in good condition with seven quarts of meal and shorts with their hay, dealing to each horse two quarts in the morning, two at noon, and three at night, with no more hay than will be eaten up clean.

In the article under the caption "What ails my Cow P?" the writer says "he uses unguintum on the parts affected, sparingly." It should be thus used, if at all, as by the cow lapping it off, and perhaps,

too, by absorption, might sicken and die, as we knew once to be the case, where this mercurial preparation was rather too lavishly used.

Some of our older farmers contend that the lice go as regularly to the animal's nose to drink, as the cow does herself to the brook. Hence, they say, that the best mode to get rid of them is, to bore a gimlet-hole or two in the stanchions, and fill with the ointment, so that it may be rubbed off upon the neck of the animal, or by applying a circle of it around the horns and neck. Others, upon the same principle, apply oil about the head and neck, and declare it to be effectual, leaving the lice to perish on the premises, or quit, just as they choose.—Whether the theory be correct, or otherwise, I am not prepared to say. Will you enlighten me?

Waltham, March, 1856.

S. B. E.

REMARKS.—The caution about unguentum on cattle is a timely one. It *never* should be used. Even when applied moderately, a little exposure may make the animal so susceptible to external influences, as to cause great mischief by it. It is a preparation of mercury or quicksilver, a metal, and passes into the circulation of the system, and, it is said, into the bones themselves. The teeth sometimes become loose so that the animal cannot eat, even if it had appetite. Good feed, cleanliness every way, frequent carding, and the careful application of soft oil, will prevent the access of vermin. Lamp oil is too clogging. A little neat's foot oil will cover a large surface if carefully applied. The *hand should be oiled*, then draw the hair of the animal through it from every part of the body, and rub the oil down to the skin. This should be repeated as long as any live animal appears.

For the New England Farmer.

POTATOES TO BE PLANTED.

MR. EDITOR:—In your paper of March 8, I notice some sensible remarks about potatoes to be planted,—probably from the pen of the intelligent superintendent of the county farm at Ipswich, as I have before met something of the same kind about his operations on the grounds under his care. I know of no man whose observations are better entitled to respect. It is so common to speak of the "tuber" or the "root" of the potato as the seed to be planted that whoever would use the term "seed" in a different sense, is bound to explain its meaning.

That fair potatoes can be grown, from what are called "small potatoes," there can be no doubt;—but if the practice of planting only "small potatoes" is continued for several years, the crop will degenerate, there can be as little doubt. For planting, I would select those of fair size and firm texture, fully ripe. I would have the ground fairly fertilized—but would take care that the potatoes planted should not come directly in contact with the manure, for when they do, there is more danger of the rot.

March, 1856.

NOTE.—In the same paper I noticed Mr. Driver's account of his Ayrshire cow, that gave about

eight quarts of milk per day, for each day of the year; this, if I do not mistake, is quite equal to the best of your neighbor's *Decons*. The fact is, that no man has anything so good that another cannot be found with something to match it.

For the New England Farmer.

MANURE—URINE.

BY H. D. WHITE.

Much has been said and written of late on the subject of liquid manures; yet few of our farmers, comparatively speaking, appear to be aware of their importance. Urine contains principles that act with great energy when this liquid is applied as a stimulus to vegetables. In most European countries, its value is so well understood that it is there rigidly economized, and appropriated with as much care as are the solid voidings of animals.

Of cows' urine, Brande gives the following analysis. In one hundred parts, those found to be present—

Of Hydrochlorate of Potass and Ammonia.....	1.5
Sulphate of Potass.....	0.6
Carbonate of Potass.....	0.4
Phosphate of Lime.....	0.3
Urea.....	0.4
Water.....	96.8
	100.0

The urine of the horse, according to Vauquelin, contains, in one hundred parts—

Of Carbonate of Lime.....	1.1
Carbonate of Soda.....	0.9
Hippurate of Soda.....	2.4
Hydrochlorate of Potass.....	0.9
Urea.....	0.7
Water.....	94.0
	100.0

Human urine, adopting the analysis of Berzelius, contains, in one thousand parts—

Of Urea.....	80.20
Lactic Acid.....	17.14
Uric Acid.....	1.00
Mucus.....	0.82
Sulphate of Potass.....	87.01
Sulphate of Soda.....	
Phosphate of Soda.....	3.18
Phosphate of Ammonia.....	2.94
Hydrochlorate of Soda.....	1.65
Hydrochlorate of Ammonia.....	4.45
Phosphate of Magnesia and Lime.....	1.56
Silicic Acid.....	1.00
Water.....	983.00
	1000.00

In the above tabular exhibit, the quantity of sulphate of soda is not given—probably an omission by the compositor; but this is by no means a material defect, as the quantity of that article, be it more or less, would affect but slightly its value as a manure agent. The components of the solid excrements, including those of the ash, or residuum remaining after deflagration, are here given, as it may be interesting to some to compare them with those of the liquid voidings. The first analysis is by Haidlen, the second by Jackson:—

Fresh cow manure, in one hundred parts,—the animal being fed on hay, straw, beans and potatoes,—gave—

2.2 of bile in a state of alteration.
8.3 mucus, &c.
14.1 non-digested (crude) vegetable remains and ashes.
75.4 water.

The ashes, which amounted to six per cent., were composed of the following ingredients:

Phosphate of Lime.....	10.09
Phosphate of Magnesia.....	10.00
Perphosphate of Iron.....	8.05
Carbonate of Potass.....	1.05
Sulphate of Lime.....	3.01
Silicic Acid.....	68.07
Loss.....	3
	100.00

Of horse manure—the animal being fed on oats, straw and hay—one hundred parts contained—

Of biliary matter, and coloring matter, in a state of alteration.....	8.7
Mucus, (crude,) &c. &c.....	6.8
Non-digested vegetable remains and ashes.....	20.2
Water.....	69.8
	100.0

The ashes amounted to six per cent., and their composition, as developed by the analysis of Jackson, is as follows:—

5.00 Phosphate of Lime.
18.75 Carbonate of Lime.
36.25 Phosphate of Magnesia.
40.00 Water.

100.00

An experiment which goes far towards demonstrating the great value and efficacy of urine when used manurally, was published not long since in an English paper. We present it in the author's own words:—

"A box of fine white sand was exposed to a heat sufficiently intense to dissipate its moisture and destroy every particle of organized matter it contained. It was then placed in a dry situation, and some seeds of the Egyptian wheat being planted in it, the whole mass was saturated with urine in a state of incipient putridity. The result of the experiment was that the wheat vegetated—grew rapidly through the season, and in autumn, rather before the maturation of the same grain in the open fields, produced a remarkable yield of fine and well developed grain. The application of the liquid was made weekly during the season."

Such facts have an important significance, and should be recorded and carefully pondered by the agriculturist.

Windham, Me., April, 1856.

For the New England Farmer.

WINTER KILLED WHEAT.

MR. EDITOR:—Winter's great winding sheet is rapidly being dissolved—the sunny breezes, for the past few days, have an *unusual welcome*, every face is joyous, and whose more so than the farmer who anxiously looks for "seed time," and the green blade of wheat that so early peers itself through the remaining snow. Very soon he will be enabled to discover the winter-killed patches, if there are any, and I would advise him to harrow over these patches and sow as early as possible some *spring wheat*, adding ashes and lime, or ashes alone, by which he adds uniform beauty to his field, and the waste spot is profitably employed.

On the whole, it has been a favorable winter for grain. The danger to the crop rises thus—a deep snow to lie, while the grain is growing and before the ground freezes, is likely to produce suffocation, and rot, or an open or an early breaking up of winter, throwing it out by the roots, by alternate thawing and freezing—this late spring is favorable.

This teaches a lesson, that no other farm-work should hinder—sow early in September, cultivate

deep, (2 or 3 inches) you have then an abiding root deep and strengthened against the attacks of "Old Jack Frost" who will never die, but at his word every flower, leaf and blade, droops and dies. He never compromises—all the garden is his and, man is *green*, if he fails to heed his law. H. POOR.

New York, April 7th, 1856.

THIRTEENTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED FOR THE FARMER BY H. E. ROCKWELL.

The *thirteenth* and last of the series of Legislative Agricultural Meetings was held in the Hall of the House, Tuesday evening. The subject for consideration was, "Fruits—their cultivation and preservation."

Hon. MARSHALL P. WILDER was invited to take the chair, and on doing so he spoke twenty minutes upon the topic assigned for the consideration of the meeting, and with which he is so entirely familiar. Few subjects, he said, exhibit so remarkably the progress of American society, as the cultivation of fruit. It is only about a quarter of a century since the first horticultural society in our country was established—the Massachusetts society, and a kindred one in Pennsylvania. Now, they are scattered over the country, from Maine to California, and from the British Provinces to the Gulf of Mexico. All are working harmoniously together, and aiding the American Pomological Society, whose influence extends throughout our national domain. The extent of the demand for fruit trees at the present time may be indicated by the fact that from a single nursery in New York, \$80,000 worth of trees and plants were sold last year. The fruit crop in the United States is now believed to exceed \$30,000,000 in value annually,—more than double the rye crop, and nearly equal to that of the potato. It is rapidly increasing in importance, and is destined to become one of the most important departments of American husbandry. No country is better adapted to the cultivation of fruit than ours, especially, of the apple and pear. Strange as it may seem, there are some varieties of the pear that seem to flourish better in Mississippi than in our own section. The Julienne pear reaches the weight of half a pound there, and the Beurre Diel sometimes weighs a pound and a half; and these from trees only seven years from the bud and fifteen feet high, bearing from one to two hundred specimens each.

It is not easy to calculate the importance of fruit culture, whether we consider the crop as a luxury, or as contributing to health and wealth. At no distant day, it is probable we shall be large exporters of fruit to other countries. It is, therefore, a subject which deserves careful inquiry as to what is the best mode of cultivation, and what are the varieties best adapted to particular localities, and also, to

general cultivation. As there would not be time to speak of many kinds of fruit in one lecture, he would confine his remarks to the pear.

The impression formerly prevailed that a long life was required to bring the pear to bearing, and hence the distich:

"He who plants pears,
Plants them for his heirs."

The first thing necessary is a genial soil, and proper preparation of it. It is absolutely necessary that the soil should be rich and deep, or be made so by artificial means. Thorough draining of the soil, also, in some cases, lies at the foundation of success. In a cold, wet soil, disease commences at the root; the juices become stagnant, and unfit for vegetation. Thorough draining permits the air to permeate the soil, warm it, and prepares the latent fertilizing elements as food. Plants do not suffer from drought where the soil is properly drained. The importance of draining is beginning to be understood, and is attracting the attention of governments, both at home and abroad. The Emperor of France has recently recommended the appropriation of 100,000,000 francs (\$20,000,000) for the encouragement of draining,—an act which, if properly expended, will redound as much to his honor as any of his life.

For fruit trees the upper and lower soils, with appropriate manures, should be thoroughly incorporated. But however properly the soil is prepared, the varieties selected for cultivation must be suited to their localities also. All are not adapted equally well to the same section of the country. All plants flourish best in soils similar to those in which they originally grew. Although we have many excellent foreign varieties, the safest way is to raise our own seedlings. Van Mons, after a long experience, advised to sow seeds in order to obtain better fruits. He (Mr. Wilder) was satisfied that the best means of obtaining the most valuable plants for particular localities is to plant the most hardy and vigorous seeds, on the principle that like produces like, and from the conviction that immature seeds will not produce vigorous, healthy plants.

In reference to the cultivation of the pear upon quince stocks, he thought the prejudice against this practice must have arisen from a want of proper management. The pear upon the quince should be planted deep enough to cover the place of junction three or four inches below the soil, and then the pear will throw out roots from itself, and the result will be not only early fruiting, but also strength and longevity.

On the subject of the preservation of fruit, he said particular attention should be paid to gathering it. The pear should generally be picked a few days before it would naturally come to maturity. If the process of fermentation commences, the cellular tissues are broken, and decay will ensue.

When picked, pears should be kept at a low temperature, that the ripening process may not commence. The great difficulty is to keep them from ripening in the warm autumnal days, and he had not been able to keep a perfect equilibrium of temperature without the use of ice in the months of October and November.

In relation to the profits of fruit culture he thought there was no branch of husbandry that could be made more profitable. One gentleman in this vicinity purchased in 1848 as many dwarf pear trees as he could plant upon an acre, setting them in rows eight feet by twelve; and between the pear trees he planted quinces. He received from them on the 5th year 120 bushels of pears and 60 bushels of quinces. He sold about 70 bushels of the pears at from \$5 to \$6 a bushel, and gave the rest away. Only two or three per cent. of the trees have died, and they are still healthy and vigorous. Similar facts might be adduced to show the pecuniary advantage of the business of raising fruits. The following list was then given as being those which are best suited to this section of the country, those at the head of each class being the earliest to ripen.

SUMMER VARIETIES.

Doyenne d'Ete,	Boston,
Beurre Giffart,	Tyson,
Rostlezer,	Brandywine.

EARLY AUTUMN.

Bartlett,	Golden Beurre of Bilboa,
Doyenne Boursock,	Andrews.

MID AND LATE AUTUMN.

Louise Bonne de Jersey,	Paradise d'Automnes,
Belle Lucrative,	Beurre Bosc,
Seckel,	Beurre Diel,
Urbaniste,	Figue d'Alencon,
Flemish Beauty,	Vicar of Winkfield,
Lodge,	Beurre d'Anjou.

WINTER VARIETIES.

Lawrence,	Beurre d'Arenberg,
Winter Nellis,	Easter Beurre,
Beurre Langlier,	Doyenne d'Alencon.
Glout Morceau,	

VARIETIES WHICH SUCCEED WELL ON THE QUINCE.

Beurre d'Amalis,	Vicar of Winkfield,
Louise Bonne de Jersey,	Nouveau Porteau,
Belle Lucrative,	Figue d'Alencon,
Urbaniste,	Winter Nellis,
Duchesse d'Angouleme,	Glout Morceau,
Beurre Diel,	Easter Beurre,
Beurre d'Anjou,	Doyenne d'Alencon.

NEW KINDS WHICH GIVE GOOD PROMISE.

Beurre Clairgeau,	Conseiller de la Cour,
" Storkman,	Sheldon,
" Superfine,	Walker,
Emile d'Heyst,	Howell.
Plus IX.	

Mr. A. G. SHELDON, of Wilmington, said he had cultivated pears but little; but he had cultivated apples with much success and profit. In his practice he had followed the counsel of an early friend, and during the last sixteen years he had set out 1200 apple trees. When he commenced setting them out, one man told him it was of no use, for he would never get the fruit from them. But that was not a proper principle to act upon. His mother, after she was eighty-eight years of age, re-

quested him to set out an apple tree in each corner of his garden, and he did it, and she lived to eat the fruit from two of them. He sold his winter apples last year, on the trees, for \$300. Apples would pay for raising for stock. Sweet apples are good to feed to horses occasionally. A neighbor had a cow that seemed to fail in her milk, and after being fed half a peck of sweet apples a day, for three days, her milk increased one quarter. For the market he thought the Baldwin variety, the best on the whole. He preferred to have his trees so trimmed as to have five main branches, in order that, whichever way the wind may blow they will be less liable to be split. He had tried setting them out at thirty-five feet apart; but he believed that twenty-five feet was a sufficiently great distance. It is better to cultivate the trees in this way, in order that the greatest amount of fruit may be obtained in the shortest time. There is only one man who knows where the first Baldwin apple tree grew, and Mr. Sheldon hoped some one would ascertain the exact locality, and cause a monument to be erected in honor of LOAMI BALDWIN, who raised that tree which has proved so great a blessing to the State. Such benefactors ought to be gratefully remembered; and he hoped a monument in honor of the chairman of the meeting would eventually be erected also.

The chairman stated as an inducement to plant trees, that a gentleman at the age of seventy-five commenced the planting of a nursery, and he lived to be over a hundred years of age, and eat of the fruits of his trees for many years.

Dr. FISHER, of Fitchburg, had planted over a thousand pear trees within the last two years. He took much pains to prepare the soil, by digging holes five feet in diameter when they were set out, and filling in with rich surface soil. He had not as yet had sufficient experience to enable him to speak of results.

Mr. W. G. LEWIS, of Framingham, first set out pear trees twenty years ago, and he had cultivated them on pear stocks. He had four Seckle pear trees, each of which yields \$25 worth of pears annually. He thought there was no business more profitable for a young man than to cultivate pears.

Mr. SIMON BROWN, of Concord, also called attention to the profit of raising fruit. A gentleman who had brought up a family, and who had reached nearly seventy years of age, and lost much of his property, had a few acres of land, upon which he set out one hundred apple trees, and now he is made independent by the fruit of his trees. Mr. Brown urged the cultivation of the smaller fruits, such as the currant, gooseberry, raspberry, &c. There is too little interest in this matter, and he thought women as much to be blamed as men in regard to it. Mothers ought to insist that their children shall cultivate fruits. He had no doubt

there would be seen a marked difference, as they go out into the world, between families reared in connection with a good garden and plenty of fruit, and those that have not been so reared. The former will be seen to go in advance of the latter in morals and virtue, and everything that goes to make this a comfortable and pleasant world. There is then a moral as well as physical aspect to this subject. Every one ought to plant a tree; and now is the time, in the spring of the year, to do this work. Let every one urge the planting of trees, to cultivate and improve the taste and to beautify our homes.

Mr. SHELDON urged upon the young present to carry out the suggestions of the last speaker, and to cherish the memory of such men as LOAMI BALDWIN. Being about to leave to take the cars for home, the chairman expressed to him his thanks for the honorable mention of his name, and assured him that he would be most happy to join in erecting a monument on the site where the original Baldwin apple tree stood; but he begged that the monument to himself might be postponed a few years.

Mr. SHELDON.—I hope it may for many. In answer to inquiries, Mr. Sheldon said he cultivated the land of his orchard, and trimmed the trees just high enough to allow cattle in plowing to pass under the limbs. He did not care how low the limbs grew, were it not for plowing under them. He set his trees about twenty-five feet apart. The trees might not last as long to be highly manured, and to have the ground plowed; but there was a quicker return and greater profits on the whole. It was better to get the money quicker and use it, than to be twenty or thirty years about it. The remarks of Mr. Sheldon were exceedingly valuable, and met with the hearty applause of the audience.

Mr. W. J. BUCKMINSTER spoke of the relative value of sweet apples, which he thought excellent for feeding to stock. He condemned the practice of buying fruit trees at auction sales, where generally only refuse trees are sold. Root grafting, too, he opposed. No security could be had for good trees except from thrifty plants, produced from seedlings.

The relative profit of cultivation of fruit and of grass or grain upon the same land, was then discussed by several gentlemen, Mr. JOHN BROOKS, of Princeton, doubting whether the profit in cultivating fruit, for a long period, would be as great as that of some other crops. He thought the land where trees are cultivated could not be profitably used for the cultivation of other crops at the same time.

Mr. BROWN had made no calculation, but he had been upon Mr. Sheldon's orchards many times and had noticed every year that he had fine crops of corn and potatoes and turnips there. He

thought the crops obtained there were as good as any on the farm, from the fact that in the endeavor to cultivate the trees well, the whole soil is well cultivated. Large crops have been obtained for sixteen years, and can be obtained for ten years more; and then, if the trees become too large to enable him to cultivate the land profitably, there can be no doubt that there may be reserved from each acre two trees that will be worth more than all the hay to be got from an acre. He (Mr. Brown) got his best crops where the trees stand, for the reason that the land is there cultivated best. He had obtained from thirty to fifty-six bushels of corn on the same land where the trees are. He had raised also twenty bushels of wheat to the acre, and four tons of millet. There was no doubt in his mind as to the practicability of raising good crops where there is an orchard, nor as to the profit from the cultivation of fruit in comparison with other crops.

The meeting this evening was large and very interesting, and the discussion, up to a late hour, was quite animated; but we have not room for further details.

For the New England Farmer.

"HOW DID YOU RAISE SUCH NICE PEPPERS?"

MR. EDITOR:—Having purchased a small place last spring, as the first step towards success in its cultivation, I subscribed for the *N. E. Farmer*, and found it a step in the right direction.

One item in relation to saving suds, slops, &c., for the benefit of the garden, was worth more to me than a year's subscription. I took a cask, and put in the droppings from the hen roost, and filled it with waste water from the house, and at night, with a pail and dipper, applied it to beds, vines, &c., and in fact, used no other manure for the garden.

Some ladies of delicate organization might have turned up their noses; but I was bound to have a garden, and I succeeded. I have been asked frequently, "how did you raise such nice peppers? Mine never get ripe." My answer is, "I take the papers."

It was my intention to enter the arena *against* small potatoes, and I experimented carefully with eyes, butts, large, small, cut and whole potatoes; and my conclusion is, that, with well prepared soil, and proper culture, small potatoes are as good as large. A friend gave me eight potatoes of the Jackson variety, about half as large as a small sized hen's egg, of which I made ten hills in my garden. The yield was three pecks, forty-seven of the largest weighing forty-eight pounds.

My employment as a teacher has taken me from home the past six months, and the consequence is, I have no manure heap this spring. So I must try something else, and, as I have an acre and a half that ought to be laid down to grass, without taking off a crop, I wish to propose a few inquiries through the *Farmer*. Had you prolonged your article in last week's *Farmer*, beyond a "reasonable limit," you might have spared yourself this article.

1. Will buckwheat, sown upon the land and plowed under, answer instead of manure?

2. Will India wheat do as well as buckwheat? It is easier to procure in this vicinity, and I am told it is of the same nature.

3. Is clover preferable to either? If so, how much should be sown to an acre to turn under?

4. My land is a gravelly loam, with any quantity of small stones; would *deep* plowing be profitable?

I use plaster and ashes, but have never tried any of the popular fertilizers.

And now, Mr. Editor, if the mooted question of "Woman's Rights" was buried, I would be the last person to give it a resurrection, yet the apostle has decided, that one right is to ask questions; and as I have not the privilege (?) of availing myself of the prescribed source, I venture to propound them thus publicly, trusting to your good nature to reply to a
Orford, N. H., 1856. SISTER FARMER.

REMARKS.—A "Sister Farmer" will always find the "latch string out," when she calls at the door of "*The Farmer*," and its editor will find pleasure in "keeping up his end of the yoke," in an agricultural conversation—if he can. Well, in reply to query

1. Buckwheat is good, and two crops may be plowed in the same season, if it is desired.

2. India wheat we know nothing of; it is probably a fancy name. But any stocky, succulent plant will answer the purpose, that is, supply vegetable matter to the soil.

3. Clover is better, we think, than most plants to be used as a green manure, as it furnishes a large amount of valuable roots. There is a difference of opinion as to the time the green plant should be turned under; some supposing the time should be when in its greenest and most succulent state, and others when the plant has passed maturity, and is in the first stage of decay. Sir Humphrey Davy says—"all green, succulent plants contain saccharine or mucilaginous matter, with woody fibre, and readily ferment; they cannot, therefore, if intended for manure, be used too soon after their death." He also thinks the proper time to turn plants under for manure, is when they are in flower, as then their leaves are most active in forming nutritive matter.

4. Plow deep, gradually. Very deep plowing, at once, to lay down to grass, would not be advisable.

EXTRACTS AND REPLIES.

PUTTING LAND TO GRASS.

MR. EDITOR:—Having but recently turned my attention to farming, I feel the want of practical experience, but as I am willing to *learn*, either from books, or from any other source, and knowing that you are always ready to give information on this most "noble and healthful employment of man," I wish to make the following inquiry.

I have a piece of land (commonly called bog land) which I wish to seed down to grass. It has been in grass for several years, but of an inferior quality, and is now covered with a "firm sod," so that an ox team may be driven over it without difficulty. I have been told, the better way would be to "top-dress with sand or gravel and seed down upon the

sod, for if broken up, it will take two or three years to get a firm sod, and the land is more liable to get thrown up with the frost."

The inquiry then which I wish to make is, would you recommend the above plan, or would you rather break up the land, and seed down with oats? for which the land is well suited. T. BRIDGE.

North Tewksbury, 1856.

REMARKS.—Undertake no more than you can accomplish, and *do it well*. Plow, by all means, manure liberally, pulverize thoroughly, sow about two bushels of oats per acre and cut them for fodder, and with the oats sow one bushel of red-top and eight or ten quarts of herds grass seed per acre. Top dressing will not give new roots to your grass—at least, not very readily.

MY MODE OF FARMING.

MR. FARMER:—In 1842 I purchased a wild lot of land, commenced clearing it, seeding down with the first crop. Some part of my land is very dry, getting no more than ten or twelve hundred pounds of hay per acre. In 1847, I commenced breaking up, plowing five or six inches deep, sowing the first year with oats and getting a light crop. But since I have become a constant reader of the *N. E. Farmer*, I have plowed eight inches deep, (and more) sowed the first crop to oats, peas and oats together, and peas separate, turning under the stubble in the fall. In the spring I harrow it well. I then haul the manure from the yard and stable, drop in small heaps, spread it even and plow in before it dries, usually about thirty loads per acre. For corn, I dung in the hill with what I make yarding my cattle nights the previous summer.

The next spring I sowed $1\frac{1}{2}$ bushels wheat, $\frac{1}{2}$ bushel timothy and four lbs. clover seed per acre. After the above treatment I got $1\frac{1}{2}$ to 2 tons per acre, instead of ten or twelve hundred pounds. I never allow myself to take more than three crops before seeding down. Shall we, as Vermont or New England farmers, take a few acres of our best land and wear it out by keeping it under the plow for six or eight years in succession? Nay, but let us cultivate our poorest part, so that we shall have none but good. FREEMAN.

Northfield, Vt., Feb. 26th, 1855.

VALUABLE SHEEP.

MR. NATHANIEL M. TRUE, of Meriden, N. H., has the present season shorn 100 sheep which averaged 6 pounds 14 ounces per head, of good wool, well washed, and sold readily for the highest price paid at time of sale. They are remarkably healthy, easily domesticated, quiet, cheaply kept and in length, thickness and compactness of fleece, are unsurpassed. A FRIEND TO IMPROVEMENT.

THE RED SPIDER ON ROSES.

MR. EDITOR:—Will you have the goodness, through your valuable paper, to tell me what will kill the red spider, that is so destructive to house plants? I have a choice rose that they have almost destroyed. A SUBSCRIBER.

Hopkinton, Feb., 1856.

REMARKS.—Whale oil soap, largely diluted, or soap-suds and tobacco water, are said to destroy the *Acarus*, or red spider. We have not tested it.

MICE GNAWING YOUNG TREES.

MR. EDITOR:—I find upon examination of my young apple trees, that the mice are making havoc among them by gnawing off the bark, near the ground, where the snow is deep. I think many valuable young trees are ruined already, and more will be, if neglected. For prevention I tread down the snow around the trees. Will you give us a method to save the trees that have been gnawed by the mice. J. H. W.

N. E. Village, March, 1856.

REMARKS.—If the tree is a valuable one, it may be saved by cutting the edges of the bark smooth and inserting, perpendicularly, three or four strips of fresh bark from another tree, binding it up carefully from the air.

NATIVE STOCK AND MILK.

GENTLEMEN:—Glancing the eye over the reports of the discussions on Neat Stock, that took place at the farmers' meeting, in the State House, on Tuesday evening last, though it is not easy to conceive, how *such varied reports of the same thing* could be given, one thing is clear, that *Native Stock* advanced very considerably on this occasion. Thanks to our noble friend, Mr. Fay, for the views he expressed. He is discriminating in observation, and independent in the expression of his opinions. He is above all sideway or sinister influences. He has no "axe to grind" on the farm, or any where else. Several facts seem to have been admitted by all the speakers.

First, that the best butter-producing cows, or dairy stock, they have ever know were natives, or the common stock of New England.

Second, that not less than *six quarts* of milk can be relied on, under circumstances most favorable, for the production of a pound of butter. ESSEX.

HOW TO KILL TICKS ON SHEEP.

MR. EDITOR:—I saw in the last number of your paper a method by which to kill ticks on sheep, put in by E. B. M. I think he must be some years behind the times. My method to kill ticks on sheep is, to feed them on sulphur, mixed with salt, in the month of March or April, before they leave the barn; give them three or four pounds to one hundred sheep, given at three different times, and I will warrant you not to have any ticks at shearing time. I have tried it three times, and it proved a killer to every tick. I have a small flock of sheep, and there has not been a tick on them for two years. Ludlow, Vt. R. C. H.

A LARGE HOG.

MR. WM. CHILDS, of Union Village, has this day slaughtered his hog, whose weight was as follows:

Round hog.....	803 lbs.
Rough fat.....	40
Total.....	843 lbs.

and was two years and nine months old.

Union Village, March 5. M. R. WALKER.

THE CONCORD GRAPE.

A. E. P., Springfield, Vt.—The price of the Concord grape, this spring, is \$2 00; or for a dozen plants, \$18 00.

PIPES FOR CONVEYING WATER.

MR. BROWN:—I would like to inquire of your subscribers about the best material to use, to convey water to buildings. In this section, a large majority of the farms can have running water to all of their buildings. But the great desideratum is, what material to use, with an eye to cost and durability. Wood lasts so short a time, that I have discarded that; with me it has lasted from three to seven years. Lead pipe, under some circumstances, is poisonous. I now carry water to all my buildings in half-inch lead pipe. I wish to take up a part of it, and put inch pipe in its place. How long will iron pipe last to convey soft, spring water? Inch iron pipe is sold in Boston for fifteen cents per foot. Is there anything better and cheaper? How should iron pipe be laid down?

I have a hydraulic ram that has been in operation three years. It has worked well, so far; raises water forty feet, and supplies my house with an abundance.

H. MORSE.

Johnson, Vt., Feb., 1856.

AGRICULTURAL ANECDOTE.

Capt. B., from small beginnings, became a *rich man*, if his own definition of that phrase be correct, (and I have never seen a better,) viz: "He is a rich man who is a little better off than his neighbors."

Capt. B. could give orders as explicit to his hired men as to the militia company over which he had presided. And he was fortunate in having Mr. P., a young man who understood the English language, and could toe the mark.

It was in the spring of the year; two stout yoke of oxen were hitched to the plow and driven to a part that had become nearly barren by cropping without manure. Mr. P. was placed at the plow, and furnished with a boy as teamster. "Now," said the Capt., "I want you should plow up the dirt that hasn't seen the sun for *four thousand years*." The orders were fulfilled by letting the plow in *beam* deep. The next order from the Capt. was, "*Now dung it to death*." *Nuf sed*. Mr. P. was as faithful as Jack Tar on board a ship of the line, and, said he, "I watched that piece of land for several years, and it taught me one thing, that is, to plow deep and manure thoroughly."

P. F.

THE GARDEN LILY.

Will you inform me through the *Farmer* where I can obtain the white Garden Lily, so called with us.

Manchester, N. H.

B. S. S.

REMARKS.—Probably in many gardens in your neighborhood, or at the nurseries.

DEAR SIR:—I was reading the fourth Legislative Agricultural Meeting of Feb. 9th, which treated of *manures and their preparation*; and I wish, through your valuable paper, to know how is best to prepare apple pomace, and how to use the same for the benefit of the land and crops. A SUBSCRIBER.

Dublin, N. H., 1856.

REMARKS.—Apple pomace rots very slowly, and perhaps for that reason has been neglected as a manure. Its decay may be hastened by mixing it with some rapidly-decaying substance, as fresh horse-dung or urine. Judging as we do of other matters, it ought to be beneficial to apple trees.

BROOM CORN STALKS.

Messrs. E. and J. CUSHMAN, of North Amherst, have succeeded in making good wrapping paper from these stalks, which have been considered worthless. They mix the stalks, in about equal quantities, with rye straw. The value of this invention may be inferred from the fact that rye straw is worth \$7 per ton, and stalks may be had for the gathering.

Application has been made for a patent.

R. B. H.

For the New England Farmer.

THE WINTER.

MR. EDITOR:—With your permission, I will give the readers of the *Farmer* a short account of the past severe winter. Although we have not had as severe weather as reports bring from other places, yet it has been uncommonly severe. Snow that fell on Dec. 25 still remains, and we have had good and uninterrupted sleighing from that time to March 20, when the main roads began to be bare, and about the 25th we began to use wagons; although at this time the ground is two-thirds covered with snow, with enormous drifts in many places. The snow in March drifted more than in any previous month, and consequently the measurement is quite uncertain. The following is the amount of snow in this place:—

December.....14 inches.	February.....5½ inches.
January.....17 inches.	March.....13 inches.

Making about 49½ inches. We have had no rain, except a light mist on the forenoon of Feb. 12.

Owing to the topography of the place, we have generally less snow and rain than other places around us. We are situated in the valley of Otter Creek, with the Green Mountains on the east, a moderate range of hills on the west and south, while at the north the land is decidedly higher and more hilly, which gives us climatic conditions of less intensity, regarding temperature and humidity, than many places around us.

The following table exhibits the extreme cold days during the winter, with the temperature at three observations during the day, and the daily mean:—

DECEMBER, 1855.					FEBRUARY, 1856.				
Days.	a. m.	p. m.	Mean.		Days.	a. m.	p. m.	Mean.	
29.....	10.....	8.5.....	2.....	1.50	3.....	4.....	13.....	4.....	4.33
					4.....	2.....	13.....	5.....	5.34
					5.....	2.....	13.....	0.....	3.66
4.....	10.....	9.....	6.5.....	4.16	13.....	15.....	4.5.....	8.5.....	6.33
5.....	22.....	1.....	0.....	7.66	14.....	16.....	10.....	3.....	1.00
6.....	1.....	7.....	6.....	6.66	15.....	6.5.....	18.....	18.....	10.17
7.....	16.....	19.....	20.....	7.66					
8.....	21.....	20.....	1.....	13.33					
9.....	5.....	2.....	4.....	2.33					
12.....	6.....	21.....	12.5.....	13.16					
20.....	10.....	7.....	2.....	1.67					
22.....	18.....	13.....	2.....	1.67					
25.....	4.....	1.5.....	2.5.....	1.67					
28.....	18.5.....	20.....	18.5.....	7.00					

MONTHLY MEANS.

	7 a. m.	2 p. m.	9 p. m.	Mean.
December.....	23.27.....	31.34.....	24.83.....	26.49
January.....	6.28.....	18.63.....	10.40.....	11.72
February.....	9.46.....	23.75.....	14.88.....	16.03
March.....	16.81.....	29.96.....	21.49.....	22.76

The prevailing wind, in the region of the clouds, has been from between west and north-west, while the amount of cloudiness is between 5 and 6-10. The weather continues cold. Thermometer this morning 10 deg. at sunrise.

Brandon, Vt., April 1.

D. BUCKLAND.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. VIII.

BOSTON, JUNE, 1856.

NO. 6.

JOEL NOURSE, PROPRIETOR,
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

JUNE, AND ITS WORK.



JUNE, perhaps, of all the months in which vegetation is growing and is to be tended, calls for more care and nice attention than any other month. The main crops have been planted, the seeds have sprung into a new existence, and presented their tender stems and leaves to the eye of the cultivator, while their roots have struck below in search of moisture, and gathered a firm hold to sus-

tain the plant in place. These evidences of life and progress gratify the hope in which the seeds were cast into the ground, and cheer the farmer in his labors.

In June, all the hoed crops require constant attention, and their treatment during this month will decide whether they are to be materially benefited, or not, by atmospheric influences. A plant, as an animal, to grow fast and well, must be healthy—and that health will depend upon the circumstances under which it is placed. If in a lean, compact, close soil, its growth will be slow, it will be more or less moss-covered, and look shrivelled and old, even in June. But if it stands in a warm, generous soil, light, finely-pulverized, and porous, so as to admit air and heat, then it will stretch away in a cheerful and vigorous growth, and come to maturity in season. Plants show this difference according to the treatment they receive; but that they may assume the latter form, the soil should

be rich, and then the cultivator and hoe kept in frequent use, especially during the month of June. Plants may derive important aid from the atmosphere; but in order to avail themselves of this, they must be vigorous and in health. During all their growth they require large portions of carbonic acid, and if small, hard and weak, they are not in a condition to receive it, though it ever floats about them, waiting to be pressed into their service. It is the food of plants and of the whole vegetable world; they absorb it into their systems, and whilst they retain the carbon, they emit the oxygen, and so feeding themselves, they purify our atmosphere. The atmosphere, also, is continually charged with vapor, which, as the earth becomes cooled at night, is condensed upon it, and if the soil be fine and porous, is taken up by it and appropriated by the roots of the plants.

There are many ways in which plants derive direct and immediate benefits from the atmosphere, provided the farmer has done his part to place them in a condition to receive it. After plowing, manuring, and planting, therefore, he can scarcely be more unwise than to fail to give them careful and attentive cultivation. So far as *his* agency is concerned, he must see that they have light, heat, moisture, and a seed bed in which their roots may traverse freely, and lay hold of the humus, or particles of mould. He can furnish them with *light*, by a proper arrangement of rows—with *heat*, by an open, loose soil, and with *moisture*, by proper drainage, and stimulating manures.

CUCUMBER, (*Cucumis*).—The cucumber is a cold, watery and indigestible fruit, yet more universally admired, probably, than any garden esculent in common use.

On analysis it has been found to contain in 600 parts not less than 582.80 of water—the remaining 17.20 consisting of thirteen different ingredients, in various proportions, the principal of which are a fungous substance, nearly resembling the substance

of the mushroom, and a saccharine matter which communicates to the fruit its peculiar flavor.

To fruit well, the plant requires rather a warm, light soil, and it is not necessary that it should be very rich. It spreads rapidly, taking root as it runs, so that thin planting is the best.

For the New England Farmer.

THE CARROT.

The following paper on the *Cultivation of the Carrot*, has been translated from the French for the *N. E. Farmer*, by an intelligent and earnest friend of agriculture. It is a sketch of Flemish agriculture, originally published by the "Society for the Dissemination of Useful Knowledge," and printed by the Bureau of Agriculture, Montreal, 1855.]

Carrots, says the author, do well in light soil which has been plowed to a great depth, and they consequently form part of the regular rotation of crops upon light lands. When they are sown as a principal crop, it is generally after potatoes, buckwheat, or a kind of turnip called rape. The earth having been well affected by these crops, is subjected to any additional plowing before winter, and receives one-half the quantity of manure usually employed, either that of neat cattle, or the sweepings of streets, with which is mixed one-third part of hog manure, under the idea that this last drives away the moles and mice of the fields which otherwise endanger the crop. The land is now plowed to the depth of six or seven inches, and thus rests for the winter. At the commencement of April the land is again plowed to the depth of nine or ten inches, and manured with liquid manure at the rate of about twenty hogshead to the acre. Two and a half pounds of seed are sown to the acre. The harrow reversed (*unverset*) is then used, and the spaces between the beds are dug up with a spade, and the earth is thrown evenly upon the seed. The roller is then passed lightly over the field. In some cases liquid manure only is used. If the preceding crops were potatoes, the soil is usually sufficiently rich, and any addition of manure has only the effect to make the carrots fork, this being caused by an excess of manure. But if carrots follow buckwheat which has not been highly manured, it is necessary to add manure in order to secure a good harvest. The more the manure is decomposed and mixed with the earth, the better for the crop. When the carrots are up it is necessary to weed them with care. This is the principal trouble; and women and children who labor upon their hands and knees are annually employed in that service.

If the seed-sower is used, much trouble is saved by the use of the horse-hoe between the rows and then the hand-hoe among the plants. If the carrots are missing, the farmer supplies the ground immediately with the turnip or spurry, in order that no time may be lost. In May the carrots are thinned, and those which are pulled are given to cows. They are left at the distance of six inches from each other. Field carrots in Flanders are of two sorts. One is the orange carrot of Holland, now quite common in England; the other is the white carrot, which is more vigorous, attains a greater size, and upon a light soil yields a much larger crop. After an experiment upon a small scale, we are compelled to believe that it is a valuable addition to our family of roots for the use of animals in the winter.

The white carrot is usually sown with another crop, as flax or barley. In such cases it is sown one or two weeks after the principal crop. The flax or grain will come forward rapidly, while the carrot is consequently kept down, and must content itself with pushing its roots deep into the soil, without much increase of size, or growth of leaves. After the flax is pulled, they pass again over the field and remove the weeds. A dressing of liquid manure is then furnished, and the carrot increases rapidly. If the principal crop is barley, the stubble is pulled up with care, and the carrot is then treated as above.

Towards the middle of October the farmer is thus able to take a crop of carrots from land which had already furnished an excellent crop in the first part of the season, and thus obtains a considerable additional quantity of food for his animals during winter. Carrots are sometimes sown among peas. The peas ripen in July, and are immediately gathered, and the carrots are then treated as before described. When peas and carrots are raised in alternate rows, the result is usually favorable. In either case fifteen loads, ten or twelve tons, are considered a good crop.

If we judge from the product of about one-eighth of an acre of good sandy land, on which, in England, the white carrot is often raised without manure, in rows one foot apart, well weeded and hoed, the crop may rise to the amount of twenty-two tons per acre. The orange carrot ordinarily produces only half that amount from the same soil.

The parsnip is sown upon lands which are too vigorous for the carrot; and in deep, rich marl, the product is abundant. Parsnips have the advantage of being able to withstand the severest cold, and consequently need not be housed, but may be left in the ground until the moment of consumption. They are not considered equal to carrots for milch cows, but are better for fattening animals. The quality of the soil should decide whether the parsnip or the carrot may be sown with most profit.

For the New England Farmer.

POULTRY REARING, &c.—No. 2.

MR. EDITOR:—In No. 1, I gave you my manner of keeping hens laying when shut up. I now send you some suggestions that may interest the breeders of poultry; every family can and should keep a few laying hens; but I would not advise every one, however situated, to raise chicks.

A person that desires laying hens will obtain the smaller sorts, as they are better layers and poorer mothers; on the other hand, a person who wishes to raise for the market will obtain the larger kind, as they will obtain an earlier market size.—Large hens kept for layers ought to produce golden eggs to pay a fair profit on the feed they consume.

Again, persons in a village, or near neighbors, should not raise poultry, as they will have to be shut up, and to shut chickens in a yard, and to think of their being fit for an early market, is absurd.—Chickens, to grow and do well, must have their liberty, besides all they can eat. A farmer, or person by himself, with a warm, dry situation, right kind of fowls, and managed properly, will find poultry as profitable as the raising of any farm stock; if not so managed, the most unprofitable. Chicks ready for the market by the first of July, weighing

from four to five pounds the pair, bring from \$1.25 to \$1.50, which is a large per cent. above what they ought to cost; and to obtain such, you must have a healthy stock. Change your male bird every year, and avoid in-and-in breeding, for of that comes ricket, deformed bodies, gapes, pip, &c. Set as many hens in March and April as desire to do so, none after that time, and as many in the former month as possible, for one early chick is worth three late ones.

Never set a hen upon hay or straw without earth underneath, as the heat escapes more readily, and in the early season is very essential; also when she leaves her nest for food it will retain the warmth longer. The bottom of the nest should have two or three inches of earth, and nearly level, to enable the hen to move her eggs when instinct prompts her so to do. Always provide food and water where she can readily obtain them, and return as quickly as possible. Leave her to herself for twenty-one days, at which time one-half of the brood will be out. Remove the shells and give no food to the chicks for forty-eight hours; nature having provided for them, until about that time, when fine cob meal, and clean meal and shorts in equal proportions, mixed with milk, sour or sweet, until they are three or four weeks old.

The hens should be cooped on the earth, or where they can have gravel and sunshine, and avoid wet and damp places. When old enough, cracked corn and buckwheat, barley, &c., can be added.

At the age of four or five weeks the hens can be set free, and with meal, corn, chopped scraps mixed with sour milk, to go to when they want, they will need but little attention after.

PREPARATION FOR THE MARKET.

Chicks that weigh three pounds alive, will dress two pounds. Having provided yourself with a garment suitable for the business, and having your fowls boxed the day previous, you take the chick by the legs, head down, and with one smart rap on the head with a stick an inch in diameter, and a foot in length, stun it; then place the body between your knees, and with a sharp knife cut the upper part of the mouth from eye to eye; waste no time, but commence with the wings, and pluck the fowl as quickly as possible. In dressing, draw the entrails only, but they must be done properly and without accident, otherwise the value is lessened. Leave on the head, and remove no crop.

I have been somewhat particular in the dressing, as poultry poorly prepared for *Boston* market will have to be sold 25 per cent. below others of same value otherwise.

Concord, Mass.

H.

CURIOUS HABITS OF MACKEREL.—The habits of these fish are very peculiar. And although they have been taken in immense numbers for three-quarters of a century, their habits are not well understood. They often move in immense bodies, apparently filling the ocean for miles in extent. They are found near the surface. Sometimes they will take the hook with the greatest eagerness. At other times, not a mackerel will bite for days, although millions of them are visible in the water. When they are in the mood for taking the bait, ten, twenty, and even thirty barrels, are taken by a single vessel in a few hours. They usually bite most

freely soon after sunrise in the morning, and towards sunset at evening. They all cease to bite about the same time, as if they were actuated by a common impulse. They are easily frightened, and will then descend into deep water. It has often happened, that a fleet of vessels has been lying off the Cape, a mile or two from shore, in the midst of a school of mackerel, and taking them rapidly upon their decks, when the firing of a gun, or the blast of a rock, would send every mackerel fathoms deep into the water, as suddenly as though they had been converted into so many pigs of lead; and perhaps it would be some hours before they would reappear. They are caught most abundantly near the shore, and very rarely out of sight of land.—*Peter Gott.*

THE BALDWIN APPLE.

During the interesting discussion upon *The Cultivation of Fruits*, at the last agricultural meeting at the State House, the conclusion of which is given in another column, Mr. SHELDON, of Wilmington, spoke of Col. BALDWIN as the person who gave this renowned apple notoriety, and said that there is now but *one person* living, who knows, for an absolute certainty, *the spot where the original tree stood*. He said a monument ought to be erected, not only to mark the spot, but with a suitable inscription to perpetuate the name of Col. Baldwin, who discovered the merits of the fruit, and took pains to extend it over the land. The chairman, Col. WILDER, said it would afford him pleasure to aid such a movement, and so did others who were present.

For the New England Farmer.

THE RHODE ISLAND GREENING.

MR. EDITOR :—Can any of your readers tell us—who live in this neighborhood—what we shall do to our trees of the yellow cheeked greening—the Rhode Island greening?

Some twenty-five years since, the trees produced very large crops, perhaps more abundantly than any other variety of apple in this region; for ten years past they don't bear at all well. The bloom is abundant; a large number of small apples fill the branches, but when the fruit is about the size of a pea, and thence up to the size of a hen's egg, it begins to drop, and at harvest time, the trees are bare; the fruit doesn't set well. One of my neighbors says it is the drought, the dry summer, that causes this. Another looks for the cause to the exhaustion of the soil. Both the old and young trees of Rhode Island Greening no longer produce crops. Shall we remedy the evil by sending to Rhode Island for new trees? Shall we try grafts from old trees? Some say this apple has run out. I don't think that any variety runs out, if the trees are properly taken care of. What is wanting to the apple tree that the stem does not hold to the tree? Having always used barn manure, must we try the manufactured fertilizers? Will guano help us? Some say the east winds produce this result with the trees; but the east winds blew thirty years ago, when this kind of apple was produced in the greatest abundance.

SUBSCRIBER.

Duxbury, 1856.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 10.

EASTERN COUNTIES—MIDDLESEX, HERTFORD, ESSEX.

The Eastern counties of England are ten, to wit, Middlesex, Hertford, Essex—Suffolk, Norfolk, Bedford and Northampton—Cambridge, Huntingdon and Lincoln.

Middlesex, Hertford and Essex may be called metropolitan counties, from their proximity to London. Middlesex, especially, which is the first county we enter on crossing the Thames, has no agricultural importance; it is small in extent, and almost entirely occupied by the immense metropolis of the British Empire. Beyond the town properly so called all that is not in villas or gardens, is under grass, either natural or artificial; the hay from which is sold in London or goes to supply the dairies of the capital. Proximity to such a large population affords enormous supplies of manure, by which the fertility of the soil is renewed. It is admitted, however, that farming, in the neighborhood of London, is not what it might be. High as rents for arable land are—averaging \$10 the acre—they do not reach the rents paid in other parts of England. The agriculture of the surrounding counties makes itself felt, through the railroads, to the very gates of the city. Farms in the environs, average one hundred acres—some are three or four hundred, but many are below one hundred. Among the most skillfully managed, is one at Willesden, of 100 acres, entirely in grass, 60 in natural meadow, and 40 in Italian rye-grass, and let at \$18,75 the acre.

Immediately to the north of London is the small county of Hertford, which like Surrey on the south, is filled with villas and gardens. It possesses one of the most remarkable establishments in England, namely the laboratory of agricultural chemistry, belonging to Mr. LAWES, the only establishment of the kind now existing. A private individual has established and supports, at his own expense, a costly enterprise, which, elsewhere, governments have declined to undertake. All England looks to the results of experiments there carried on, and it has already furnished valuable information as to the kinds of manures best suited to the different crops and soils. The laboratory is on the scale of a regular manufactory, with steam engine, enormous furnaces, &c., and the entire carcasses of cattle are reduced to ashes, for the purpose of exact analysis. A piece of ground of 12 or 15 acres serves as a field for trying experiments with different manures.

The impression prevails in England that further progress in agriculture must be by the aid of science, that expense or capital has done nearly all it can; and a half hour's conversation with the first farmer one meets, and his talk of ammonia and phosphates, will convince you that the agricultural mind is running into agricultural chemistry, how wisely, and with what results, time will show.—That it is difficult to lift the veil that covers the mysterious processes of nature, all will admit—that it will never be lifted, so that we can act intelligently in the cultivation of the earth and the rearing of animals, who will say? Agricultural chemistry seems to have established and explained the fact that the most successful manure for grass land is bone dust; and farmers in England willingly pay proprietors seven per cent. annually of the expense of laying this powerful manure upon the soil; as

upon every four acres they say it gives them sufficient extra food for an additional cow. Chemistry says the phosphates are taken out of the soil by the constant carrying away of the milk, and requires to be renewed. One or two tons of ground bones are used to the acre, the effect of which is immediate and lasts for fifteen or twenty years.

Next to these two counties comes the county of Essex, containing, like Sussex and Kent, about a million acres, and it much resembles these counties in its history. Though so near to London, its agriculture is not in good condition—it almost all rests upon clay; and its system of farming, for this reason, has, like that of Sussex, cereals for its object. For the same cause, there is a greater division of farms than in three-quarters of England—the farms generally varying from one hundred to three hundred acres. Many farms are cultivated by their own proprietors. Properties in this county have generally been mortgaged to the extent of more than half their value; and carried on therefore with little capital. The result has been foreclosures, and a pretty large number of forced sales. The English attribute this result to too great division of property—I should attribute it to want of capital to furnish stock and carry on the farms. Large proprietors, as a general thing, have more capital than small ones, in proportion to the extent of their property—often more intelligence; but a proprietor of a moderate sized property, of capital proportioned thereto, and equal intelligence, will carry it on better than a large proprietor, as I think.—That sized farm is the best which most reduces the expenses of production; but capital, capital, with intelligence, is the thing in farming, as well as in manufacturing; and a small farm can do better without capital, than a large one.

Fortunately for Essex, it possesses one of those energetic individuals, who is of a spirit to contend with the difficulties by which farming is surrounded in that county. This is Mr. MECCHI, a cutler by trade, but devoted to agriculture, who owns the famous farm of Tiptree Hall, situated in one of the worst parts of the county, and often visited and described by foreign agriculturists. All that the inventive spirit of the English could imagine to make the soil produce to its utmost extent, and overcome the resistance of clay lands, is employed by this indefatigable man. The farm is of about 170 acres, the average size of farming and property in the county; the farm was originally of marshy land, which had resisted hitherto all kinds of culture. The soil has been relieved of stagnant water by thorough draining, and then turned up to the depth of two feet, and transformed by means of the most powerful fertilizers. In the centre is a steam engine, the soul, as it were, of the farm. Mr. Mechi feeds on the farm, besides working horses, 100 horned cattle, 150 sheep, and 200 pigs, or equal to about one head of cattle per acre; and these animals are entirely stall-fed, and grow and fatten almost perceptibly. There is scarcely any natural pasture on the farm; one-half is in wheat and barley, the other half in artificial fodder and roots.

It must not be supposed that this farm presents the true state of English agriculture. It is rather a vigorous effort, than a success—more admired than imitated. It is said Mr. Mechi sinks a good deal of money on his experiments. But if he does, I may, with some show of reason, prefer his extravagance in farming, to that of the men (who are

not few,) who, with their money, would have built on the same land an elegant villa, with Gothic summer-house, and other similar appendages.

It would seem, from the history of farming in Essex, that it is as true in England, as with us, that debt is the great enemy of farming—that the mortgage is a blight on agricultural prosperity—and want of capital is fatal to success. On the other hand, Mr. Mechi's farm of Tiptree Hall would seem to show that capital may be over-spent, so as to give no return; and that there is a proper and wise prejudice among practical farmers against extravagant or high farming. Still, does not the fact stand that the farmer must make liberal advances to his land, and must have an amount proportioned to his acres, invested in stock, implements, fixtures, drainage, &c., in order that he may be successful? What is wanted is, that the practical farmer who has capital, should, judiciously and for his own interest, advance more capital than he now does to his farm; not that he should be called upon to imitate the man, who, city-bred, comes forth into the country to carry on his newly purchased farm, as he would a mercantile adventure. The farmer should rather compare himself with the manufacturer, and consider himself engaged in a similar pursuit; the manufacturer rarely succeeds without capital; no more can the farmer; both raise or make objects of necessity for the market, and the one employs the agencies of nature about as much as the other in producing his results; both occupations require capital, thought and skill. I am tired of hearing agriculture called a science—it is not a science any more than manufacturing is a science—science may aid farming or manufacturing; thus far it has aided manufacturing more than it has aided farming.—Agriculture is an art, a business rather than a science, to be conducted like all arts or business, by capital and skill.

M.

For the New England Farmer.

USE OF PLASTER.

MR. EDITOR:—I wish to make some inquiries of you or your correspondents in regard to the use of plaster. Plaster costs at the mill here eight dollars per ton. Will it pay to sow it on pasture and meadow land? If so, on what kind of land and what quantity per acre should be used? A farmer once said to me he sowed one year seven tons, and could perceive no benefit therefrom. I have applied it to potatoes when planting, which I think decidedly preferable to applying it to the tops, and also to oats with marked advantage. Whether it should be used on oats when sowing and harrowed in or after they are up, I am undecided. Either way the crop will be greatly increased. Can it be used to profit also on wheat and rye?

It is customary in this region to sow buckwheat about the 20th of June, but the crop is often greatly injured, if not destroyed, by early frost. Can it be sown earlier and a good crop obtained?

Can you give a description of a cheap stump machine which can be operated by one horse or a yoke of oxen?

S. S. B.

Essex, Vt., 1856.

REMARKS.—Willis' stump machine is the best we have ever seen. We have often spoken of it, and given an engraving.

For the New England Farmer.

HOW TO TREAT AN OLD ORCHARD.

MR. EDITOR:—In your directions to your correspondent relative to cultivating old orchards on poor land, I think you are not quite thorough enough for a farmer of the "old Bay State," and many of us away up here in Vermont look to you for direction *how* to do all things pertaining to farming, so that a mistake of yours causes great injury. I will relate my experience in this matter, which you are at liberty to use as you think proper.

Seventeen years since, I purchased a lot in this village, one mile from, and two hundred and fifty feet above the lake, having a western slope. When I tell you the owner was a sea-captain, that he had not seen it for fifteen years, during which time it had been rented to, generally, yearly tenants, you can imagine its condition better than I can describe it.

On this place was one and a quarter acres of what had once been an orchard of apple trees only; more than half the original trees had died of starvation, or been cut down and burned by various tenants; about thirty trees remained; one-third of them grafted when young, the others natural fruit. These were in such condition that all my friends advised me to cut down most of them, and plant young trees—but, like most Yankees, being stubborn and self-willed, I determined first to try experiments.

I made two drains through the lot, 20 inches deep, carefully completed after the usual mode of *blind* drains. In the spring, after wet seasons, water runs freely from them, two to four weeks; after the dry season, they are dry during the spring; summer rains never affect them. In April, I purchased and applied 50 loads of coarse manure, at an expense of one dollar a load. This was spread evenly, the land carefully plowed and levelled with a hoe. I then applied eight loads of twenty-five bushels each of refuse lime, perhaps equal to half the quantity of fresh slaked lime; this was spread on the surface. The next operation was to have a gardener from the "ould counthrie," (brought up as most foreign gardeners are at the end of a spade-handle) dig with a spade about each tree, twelve to eighteen inches deep, and as far as the roots extended; to complete two trees was his regular day's work. In the summer following, I employed two active young carpenters to prune it, of course, as I directed. Large quantities of dead and decaying limbs were removed; on many trees nothing but sprouts were left; some half a dozen trees were so decayed that as soon as they commenced growing, the dead portions were loosened so as to drop out, and the trees needed heavy posts to sustain them; nearly all of them were either hollow or decaying at the heart.

The next season I commenced grafting; the trees being in active, growing condition, large tops were soon formed. I have since yearly applied a heavy top-dressing of "long stable manure," mostly straw or swamp hay used for bedding horses and cows, and as often as once in three or four years, refuse lime or ashes and peat or swamp muck. The ground has not been cultivated where shaded,—nor has it been necessary—the yearly top-dressing keeping it very light and porous. The grass has been cut often every season.

The practical result of this treatment has been,

that an orchard considered worthless, has, in proportion to the number of trees produced *more and better* fruit than any other in this county, more uniformly productive, and is still in a healthy condition. The vacant places when purchased were filled with young trees now in full bearing. But one tree has died in seventeen years, and that in the winter of 1854-5, after the drought of the preceding summer which was very destructive to trees of every description.

This may look like too much work, but if any farmer will try the experiment, call his land and old trees \$1000 per acre—charge his manure and all labor to expense account—sell all the products, and after fifteen years' experience he will find a balance of profit equal to any other part of his farm and probably much greater. C. GOODRICH.

Burlington, Vt., March, 1856.

REMARKS.—We have referred to the remarks made upon treating an old orchard, and really can find nothing that looks like "a mistake." The occasion did not call upon us to go into minute details, as you have done, and done well. In most cases, we are obliged to leave a great deal for the further inquiry and good sense of the operator to find out for himself.

TIME TO PLOW.

It is often difficult to know when to plow. If ground is moved when wet, it often remains in very hard and compact lumps. If we wait until the ground is dry, so much work is brought together that it cannot be done in time. A few common sense thoughts may aid in this matter:

1. Sward ground may be plowed when much wetter than any other, without causing it to be hard on drying.

2. Sandy and gravelly land is much less injured by handling when wet, than clay or clay loam.

3. The plow is not half as bad for wet ground as the harrow for several reasons. In plowing, the team tread on the broken ground far less than in harrowing. The action of the plow is different. The one raises up and turns over, the other drags down and presses together. So true is this, that ground thus harrowed will soon become a mass of brick-bats, and remain so for years. Ground may be plowed when pretty wet if you will let it remain untouched afterwards, till dry and warm, and by this treatment it will be fit for sowing sooner than if not plowed.

The same principles will apply to spading and raking. Ground may be spaded up when considerably wet, if you lay down each spadeful carefully, and be sure not to touch it with the spade or with a rake until it is thoroughly dry. But if each spadeful is knocked down with the spade, and as soon as the surface crumbles, is raked until it is beautifully smooth, the air will be to a considerable extent excluded, and the whole ground be hard and difficult to till during the whole season. Plowed or spaded, the ground, if wet, should be left as loose as it can be left, that it may dry rapidly and crumble easily, and the case must be a very urgent one which will justify putting the harrow or the rake upon it till it is dry. Then it will break down easily and remain light and easily tilled through the entire season.—*Dr. Reed, Pittsfield.*

For the New England Farmer.

APPLICATION OF BARN MANURES.

My general practice has been to keep manures as dry as possible until it is to be used, and for this purpose I have built leantos to my stables.

My mowing and tillage land (fifteen acres) is a mixed medley of dry, sandy, gravel loam, heavy loam and swamp muck. When I first occupied the farm eighteen years since, it was what was usually called "run out," having been rented for several years, and the crops sold or carried off; now I know of no land more productive in this picturesque valley of the Deerfield river. The course pursued has been the following, beginning with the uplands.

In the spring, plow as much greensward as I can manure *thoroughly*. I have uniformly plowed a little deeper than any of my neighbors, and take more pains to plow well, but detest a flat furrow. The manure is spread on the surface as evenly as possible, in its raw state; from twenty to forty cart-loads to the acre, and thoroughly harrowed, planted and thoroughly hoed three times. The corn is cut up and taken off early in October, and the ground sowed with rye, and seeded in the spring to ten quarts timothy and two of northern clover. I usually mow three years, then plow again as before.

Last spring I adopted the method generally recommended by scientific farmers of *plowing in* the manure on the whole of my planting ground, in three separate patches, composed of four different kinds of soil, and all in good heart. The result was that I had a smaller growth of corn than I have had for several previous years. I shall plow in no more manure at present.

The swamp lands after being thoroughly drained, one part was plowed and planted with corn, manured with green horse manure, and afterwards seeded; another part was covered with about one hundred bushels of loamy sand to the square rod, manured and seeded with grass and oats; and another part plowed and seeded in the sod in August. This last method I consider the best.

I occasionally spread green manure on moist mowlands, and after bushing and rolling, sow a bushel of gypsum to the acre; the same on my corn lands also as soon as the manure is spread. The manure that is made during the summer by plowing occasionally the droppings of the barn-yard with what had been carted in the previous fall, is spread on such part of the mowland as is not to be disturbed by the plow, as soon as is convenient after haying, the sooner the better; when the yard is to be filled again with either sandy loam or muck, the *which* to be decided by the quality of the land for which it is intended. P. FIELD.

E. Charlemont.

HYDRAULIC RAMS.—Mr. R. A. Gesner, of Salem, Oregon, asks the editor of the *Country Gentleman* some questions relative to the Hydraulic Ram; and as his reply may be of service to some of our readers, we subjoin it:—

Three feet fall, in thirty feet, as in the instance mentioned, will be ample to operate a water-ram to advantage, and raise the water to fifteen feet as proposed, or to any other desired height, if it be five times this elevation. The ram will not be likely to succeed, however, with a driving-pipe less than one

inch in diameter, and the quantity of water should be at least half a gallon per minute. The discharge pipe need not in this case be more than a half an inch internal diameter.

The quantity of water elevated in as many times less than the amount furnished by the spring, as the elevation of the discharge pipe exceeds the fall of the driving pipe, with friction also deducted. If, for example, the drive-pipe descends three feet, and the elevation is thirty feet, a spring furnishing one gallon per minute, will elevate one-tenth of a gallon per minute to the height named, or one gallon in ten minutes, deducting the amount of friction. The latter usually varies from 10 to 20 per cent. in this instance, the real quantity of water driven 30 feet high would be about 84 gallons every 100 minutes, or nearly one-twelfth of the whole water of the spring.

As the power of the ram depends on the momentum of the descending cylinder of water, there should be a longer drive-pipe where there is a greater head to be overcome.

For the New England Farmer.

DARLING'S EARLY SWEET CORN.

MR. EDITOR:—I think it was in an early volume of Downing's *Horticulturist*, that I first observed a notice of "Downing's Early Sweet Corn," procured by a cross with the Canada corn. It has proved with me, (and I have raised it several years,) an exceedingly sweet kind of corn, as well as an early sort. It is incomparably sweeter than Mapes' sweet corn, which, whatever may be its virtues in late keeping, certainly has very little sweetness about it, and is moreover, a very late kind, the stalks in growth and root showing a western or southern origin. Of the various dishes of sweet corn I have ever eaten, I have never found any equal in deliciousness to "Darling's Early," and hope those of your readers not familiar with it, will procure it, and I feel sure that they will confess that a new world of sweetness has opened for them. It can be obtained, I presume, at your seed stores in Boston.

THE MOON AND VEGETATION.

Not having had time to read some of the last numbers of the monthly *Farmer*, I know not but the moon question has already been settled therein, but if not, I would inquire if the advocates of lunar influence bear in mind that whether the moon is new, old or full, there is as much of the substance of the moon towards the earth in one case as the other, although that side be not fully illuminated by the sun except at full moon. It may be reasonable to suppose the tides affected by the relative position of the moon toward the waters, but much more difficult to suppose that the greater or less light from the moon can affect vegetation, when the entire face of that body is always toward us when it is in the heavens; and yet more difficult to suppose that vegetation is affected by whether the eighth of the illuminated part of the moon visible to us is on one side of the moon or on the other, or, in other words, by the moon's being "old or new," for that is all the difference between old and new moon.

It is so easy for people to infer cause and effect from mere coincidences that it is not strange that many mere notions, unsupported even by probability or any reason, find many firm believers.

Northampton, April, 1866.

L. S. H.

For the New England Farmer.

FEEDING COLTS.

MR. EDITOR:—I notice in a late number of the *Farmer*, an article from "A Subscriber," calling upon some one to point out the "best" mode of feeding colts the first and second winter after taking them from the mare, &c. &c.

The task of pointing out the "best" way of doing these things I shall leave for another to perform, while I briefly state my own method of treating colts, during the time above mentioned.

I never wean a good colt before he is six months old, unless the dam is a very bad nurse. In that case, I wean the colt when it becomes necessary to stable the mare. In all cases, I wean on hay, and from the commencement of weaning, till there is good grass the following spring, I give a daily feed of a pint of oats, and a bran mash, or roots; carrots, if I have them. I never allow a colt to stand upon a floor before he is two years old, as I believe the practice prejudicial to the formation of good feet. During the second winter, I give my colts no grain or roots. If a mare brings a foal every year, I would not allow her to nurse more than six months; and in fact, no good mare should be allowed to nurse more in any one year, and in my opinion, if the weaning is deferred longer, it is at the loss of the owner.

The above are a few of the many rules observed by me, in breeding and rearing a hardy and long-enduring horse. Whether he is to be used in future, as a horse of all work, or to be kept exclusively for breeding purposes, I have found the final results to be nearly the same.

Derby Line, Vt., 1866.

SOLOMON STEELS.

For the New England Farmer.

A. L. BINGHAM'S SHEEP-SHEARING FESTIVAL.

Having seen a notice in the *Ohio Farmer*, from a gentleman in Jefferson Co., that he would shear the Silician sheep for dollars and cents, against any breed in the United States, I was induced to advertise, through the agricultural papers west, that I would shear thirty ewe lambs, dropped last March, against an equal number of any man's raising in the world, for quality and quantity, unwashed or cleansed, or for dollars and cents, according to live weight, every man keeping his sheep as he pleases. Now I propose, in compliance with what I have published, to hold this sheep shearing festival at Middlebury, on the 17th and 18th days of June next, commencing at ten o'clock in the morning of the 17th. The first day will be devoted to the shearing of the sheep, the second will be devoted to a general exhibition of horses, also there will be purses offered for the fastest time made by trotting horses.

Also, there will be an exhibition of ladies' and gentlemen's horsemanship, to be held on the fair ground, near the village. Also, at the close, in the evening, there will be, what is called a sheep shearing festival ball, to be held at the Addison House, Middlebury. Now, one and all are invited to attend, and have a good time; all papers will please confer the favor to give notice through the land, and oblige

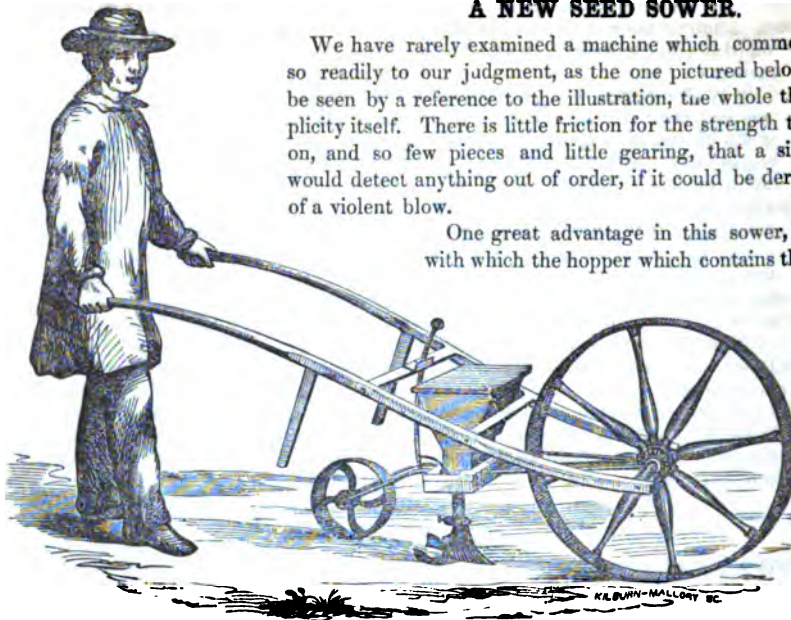
A. L. BINGHAM.

West Cornwall, April 7, 1866.

A NEW SEED SOWER.

We have rarely examined a machine which commended itself so readily to our judgment, as the one pictured below. As will be seen by a reference to the illustration, the whole thing is simplicity itself. There is little friction for the strength to be wasted on, and so few pieces and little gearing, that a single glance would detect anything out of order, if it could be deranged short of a violent blow.

One great advantage in this sower, is the ease with which the hopper which contains the seed may



be taken off and the seed changed. To do this nothing is required but to move a hasp, when the hopper may be taken off and the brush removed.

In this machine we have the advantage of an adjustable plow, by its being hinged to the arbor of the driving wheel forward, and holding the roller in the rear of the plow by the same arms, thereby giving a uniform depth to the seed, independent of the operator. There is also attached to the plow an iron rod, which passes through the cross bar of the handles, by which the operator is enabled, by dropping the handles, to raise the plow, and at the same time the seed is cut off, and the whole thing is thrown upon the forward wheel; then the machine may be run from one row to another, or from field to field, in the easiest manner possible. The plow is self-covering. The whole thing is simple, and easy in its operations.

We believe this machine will prove a valuable one, but intend to give it a thorough trial and then speak of it again. The improvements are by Mr. JAMES A. HOWE, of Boston, the same gentleman whose skill wrought the changes in the Horse Hoe which were figured last week.

The machine is light, and will be sold cheaper than the large ones have been heretofore.

SEA BATHING.—Horne Tooke ridiculed the practice of sea bathing, and said, if any of the seal species were sick, it would be wise for a seal physician to order them to go on shore. Porson declared that sea bathing was only reckoned healthy because many persons have been "known to survive it;"—but Sheridan's objection to salt water was the most quaint: "Pickles" said he, "don't agree with me."

For the New England Farmer.

ROCK ISLAND, ISLAND CITY.

I mean the veritable Island itself, not the city of that name, just below it. This beautiful three hundred acre plat is, and is to be, Government land, which no sharp speculator in land-warrants can "enter," at any price. Nature, in her uncontaminated, primal mood, reigns here undisturbed. Venerable oaks and elms, thrifty young hickories, maples, ashes, clambering vines, with all the nameless shrubbery and undergrowth, interspersed with little open grass-plats, gentle elevations and depressions of the surface, responsive to the underlying rock, and surrounded by the ceaseless murmur of the Mississippi rapids, render this one of the most enchanting spots on earth. While you are still shrouded in a mantle of snow, the grass is here quite green, and the birds are singing as merrily as in May. One is forcibly reminded, as he enters the little quiet nooks, or wanders through the narrow paths, of the original garden, where Adam and Eve

— "both stood,
Both turned, and under open sky adored
The God that made both sky, air, earth and heaven,
Which they beheld."

All the more delightful and refreshing is such a place, by contrast with the monotonous prairies on either side, and the "intense practicability" which is every where exhibited. Not that a wise and an earnest practicalness is to be despised, or is anything else but a wholesome duty; but that neither is an occasional recurrence to the principles of taste and beauty in nature, which God has so profusely planted around us, anything else but a duty also, and a prime felicity.

The Iowa farmers, in this vicinity, are now sowing their spring wheat, while the frost is still a foot in depth, in many places. So soon as the ground is thawed down sufficiently to receive a plow, it is ready for seeding. The rapidity with which the

surface dries, while the frost is still deep below, is very remarkable. There is none of the up-heaving and continual moisture, so common in Massachusetts, till the frost is gone; but the roads and fields become dry and dusty as summer, while it is gradually melting away beneath. I remember hearing Prof. Nash complain of the dryness of the atmosphere at Amherst, as unfavorable to the throat and lungs. But here it is much dryer, and yet the country is regarded as peculiarly favorable to that class of disorders. How does the Professor explain it?

The tide of immigration this spring is immense. The great bridge across the Mississippi, at this point, is expected to be ready for the iron horse in another week. All of the most valuable land in Illinois is already taken up, and that in Iowa is rapidly being so. No public land of any value can be had, within a hundred or two hundred miles of the river. Why do not more people go to *Missouri*? Land can be obtained there, within ten miles of the Iowa line, for five dollars an acre; while at the same distance, on the other side of the line, the same quality of land brings fifteen dollars an acre.

M. H. C.

April 12, 1856.

EQUIVALENTS OF VARIOUS PLANTS TO HAY.

MR. EDITOR:—Farmers are often at a loss to know how much of one kind of ordinary fodder is equal in nutrimental value to an equal amount, in weight or measure, of another kind. For instance, if I find my horse is kept in good working condition on eight quarts of oats and ten pounds of hay every twenty-four hours, how much *corn* must I give him in the same time with the eight pounds of hay to produce the same result as the eight quarts of oats? In *Berger's Economy of Farming*, translated by Smith, there is a "Table of Equivalents," which will be found useful to those having the management of stock. The following is an extract:—

100	pounds of hay are equal to—
90	pounds clover hay, made when fully blossomed.
98	" made before it blossoms.
98	" second crop of do.
98	" Lucerne hay.
99	" Balfain.
410	" Green clover.
467	" Vetches and tares, green.
275	" Green Indian corn.
374	" Wheat straw.
244	" Rye straw.
164	" Oat straw.
158	" Pea straw.
201	" Raw potatoes.
175	" Boiled potatoes.
239	" Maagei wurtzel.
504	" English turnips.
275	" Carrots.
308	" Ruta baga.
54	" Rye (grain.)
46	" Wheat.
50	" Oats.
64	" Buckwheat.
57	" Indian corn.
45	" Peas.
55	" Beans.
60	" Horse-chestnuts.
68	" Acorns.
62	" Sun-flower seed.
69	" Linseed cake.
106	" Wheat bran.
109	" Rye bran.
167	" Wheat and oat chaff.
167	" Rye and barley chaff.

An ox requires two per cent. of his live weight in hay per day; if he works, two and a half per cent.

A milch cow, three per cent. A fattening ox, five per cent. at first, and four per cent. when half-fattened, and afterwards. Sheep, when grown, three and a half per cent. of their live weight in hay per day." I have found this table of great value while feeding different animals on diverse kinds of food, as well in my stall-feeding and fallowing operations. —*Germanstown Telegraph*.

EXTRACTS AND REPLIES.

MEADOW MUCK.

MR. BROWN:—If I remember right, it is reported in the *New York Times*, that some one made the remark at the Farmers' Club in New York, that muck, as it is generally used, was not only worthless but absolutely poisonous. Now sir, as I have been drawing muck all the time I could get this winter, the very idea that my labor may be worse than vain, is no very pleasant thought. It is said 12 or 15 bushels of ashes will make one cord equal to cow dung. Ashes are worth here 20 cents per bushel, and difficult to find them at that price.

If you will be so kind as to give us directions how to manage with our muck, it will most thankfully be received.

A subscriber to your paper, Mr. Wm. Gould, made a fish pond last summer. He put into it 120 brook trout. He would like a little information in regard to their management, feeding, breeding, &c.

S. CUNE.

REMARKS.—Don't be alarmed, friend CUNE; you have been profitably engaged during the winter. Now put your muck into a heap, and mix as much ashes with it as you can. At 20 cents a bushel, it is cheap manure. After the heap has remained a few months, overhaul and pulverize it. If you wish to haul out manure that you are not ready to use, cover it up well with the muck, instead of hauling too much muck to the barn. Such a heap of muck on a farm is literally a bank from which you may always draw with pleasure and profit.

The *New York* man said, "*as generally used*," and meant by that, we suppose, hauled from the swamp to the upland and directly plowed in. In *New England* some of us know a better practice, and among the number is Mr. SOLYMAN CUNE.

There is a little work published on "*The Artificial Propagation of Fish*," which may be found at the bookstore.

LIMING LAND WELL MANURED.

MR. BROWN:—I have land of a light, sandy character, on which I intend to spread a good coat of barn-yard manure, and plow it under, and plant corn and potatoes. Will an application of lime, at 33 cts. per bushel pay? If so, how and where should it be applied?

G. S. N.

Deerfield, 1856.

REMARKS.—We think not. Try the lime on a quarter of an acre, and satisfy yourself.

J. S. NEEDHAM, *South Danvers*.—Please accept thanks for the White Thimbleberry plants.

CAULIFLOWER AND SEA KALE.

MR. EDITOR:—Please inform me, through the columns of your much valued paper, the best time for planting cauliflower and sea kale; and is the sea kale as good for pickling as the red Dutch cabbage? Also, the best manner of cooking or preparing for pickling—and oblige a
Derby, Vt., April.

FARMER'S WIFE.

REMARKS.—Sow cauliflower seeds in the hot bed in March or April, or in a warm border in May for late setting out. The ground should be as finely pulverized as possible, and shaded with thin matting or a shingle slightly raised from the surface, until the plants show themselves.

Sea kale is sometimes sown in October; in the spring it should be put in as soon as the soil can be brought into good condition, in drills an inch and a half deep, and fourteen inches apart. We know nothing of it as a pickle.

SAND KNOLLS AND PINES.

Several years ago I called on an uncle that lived in Connecticut. He showed me a piece of land that was covered with a handsome growth of fine trees, six or eight inches through. He told me the land was once a blowing, sandy knoll, and that he went to the woods and gathered a lot of pine balls, (seeds) and sowed them on to the land; perhaps he plowed them in.

Would not many of our barren knolls be improved by being covered with little pine trees, which would soon get to be large enough for timber?
C.

MANURES.

I wish to ask your Beverly correspondent, if he supposes he can make a practical, thinking farmer, believe that the exposure of manure to the drying sun and winds, for but a few days, will destroy all, or even one-half of its fertilizing properties? I should like to see his man effectually manuring four to six acres per day, with liquid manure. Now I have a high estimate of liquid manure, but think it best when one writes to keep probabilities in view. I am satisfied that a great loss is sustained by applying stable, yard, or even compost manure, to grass land that is fit for tillage. It is much better to adopt a rotation of crops, and apply no manure, except when under till. If top-dressing is applied to grass land, other than liquid, let it be composted, by all means, with a large proportion of muck, loam, or other earthy matter.

Chicopee, April, 1856.

H. N. SHERMAN.

CURE FOR THE HORN DISTEMPER.

Bore the horn with a gimblet, and blow through a quill into the horn, a small quantity of saltpetre; or pour into the ears fine mustard and vinegar, well mixed together, taking care to hold the ears in a proper position to retain the mixture as long as possible. The application of either of these remedies may be repeated, if necessary, after one or two days. Either method is a "sure cure." In the most malignant case, apparently, of this disease I ever knew, I tried both these remedies with complete success. This prescription, which now appears, I think, for the first time in print, in the *Fur-*

mer, may save some readers many times the price of their subscription to this paper.
S. G. B.
Essex, Vt., 1856.

REMARKS.—We know nothing of the virtues of this prescription, and as a general rule, are opposed to all violent remedies.

TICKS ON SHEEP.

MR. EDITOR:—In answer to the query, whether the receipt given in your paper of March 29th, to "kill ticks on sheep," is a safe operation or not, I have to state as the result of my own experience, that in a number of cases where it has been applied (precisely according to the directions given) to flocks varying from one to two hundred, I have not been able to see any injurious effects in one single instance, while it was a most effective destroyer of the tick.

Can you, or any of your correspondents, inform me through the columns of your valuable paper, where and for what price may be obtained a full bred South Down buck and ewe?

J. CHAMPLIN.

Pleasant Hill, R. I., April 4, 1856.

MATERIAL FOR WATER PIPES.

H. MORSE asks what is the best material for conveying water to buildings. I think, cost, durability and health regarded, that wooden pipes should be used. I have nine rods, laid three feet deep in a moist clay soil, more than thirty years ago, which convey water freely yet. I have also a wooden pump, made twenty-two years ago, and often in use, that I now prefer to a new chain pump.

WATER LIFTER.

D. CHILD asks if a cow stepping on a platform can raise water for herself from a cistern or well?—Ans. *She can.* The cost of the machine and fixtures will be from twenty to fifty dollars, as depth of the well, the size of the machine and kind of material used to make of, may be. One that will discharge six gallons, by the weight of the cow, each time she steps on the platform, made mostly of wood, will cost twenty-five dollars.
N. E.

MANURE FOR MEADOWS.

I wish to inquire through your paper, whether ashes is good for low meadows, or what is best to increase the crop of hay. ASAHEL UNDERWOOD.
Bennington, Vt., 1856.

REMARKS.—Ashes is good for any crop. But top-dressing, with fine composted manure, does well on such land as you describe.

FISH GUANO.

MR. EDITOR:—I would like to inquire through you, or your valuable paper, if any one has made an experiment with the fish guano manufactured in Providence, R. I., by the Narraganset Co.?

Yours respectfully,
JACOB CROWLEY.
Mansfield, Mass.

REMARKS.—No case has come to our personal knowledge. Try a barrel or two, and make careful note of it; keeping an accurate record of the amount of manure you apply, of the manner of cultivating, and the kind of season.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 11.

EASTERN COUNTIES.

SUFFOLK, NORFOLK, BEDFORD, NORTHAMPTON, CAMBRIDGE, HUNTINGTON, LINCOLN.

In Suffolk, Norfolk, Bedford and Northampton, we witness the results of the agricultural and social revolution which took place about sixty years ago, under the auspices of Arthur Young. At the close of the last century, the lands in these counties were in a more miserable and neglected condition than the lands in the southern counties at the present day; and their poor and sandy character seemed to offer fewer resources to the cultivator than the pine plain lands on the banks of Connecticut river. It was never thought possible to turn the greater part of them to better account, than as large rabbit-warrens; but now they rank among the richest and best lands of England. What mercantile adventure, moderate-sized farming, permanent stabulation, drainage and steam have done in our day for stiff lands, large farming and the four course rotation accomplished, sixty years ago, for light soils.—Money, in those days, was not as plentiful as now, and large amounts of capital were confined to few hands. Everything tended to favor large property and large farming, and the lands most free, for the purpose, were those best suited for large farming. Hence the great success of Young's system, which up to the present day, has acted like a second charter for the English.

Suffolk has not profited by the system of Arthur Young. A large portion of the county partakes of the clayey nature of the neighboring soils to the south; in the north alone, light soils are to be found, at least to any extent. Suffolk, through the influence of Young, is, however, the seat of the largest manufacture of agricultural implements in England. There are to be found the celebrated establishments of Messrs. Ransomes of Ipswich, Gannett of Leiston, &c. These immense factories testify to the extensive use, among English farmers, of the heaviest and most costly machines.

Norfolk has been the true theatre of the success of Arthur Young. The north and west of this county forms an immense sandy plain of 750,000 acres, where there is no obstacle to large property and large farming; and where everything favors horse tillage, cultivation of roots, the use of machines, and the four course rotation. By means of this system, steadily pursued for sixty years, these inferior lands, producing scarcely a dollar and a quarter per acre, in 1780, now return, on an average, six dollars and a quarter per acre, or five times the former amount, as net production; and the gross production has risen, in at least, an equal proportion.

A large part of the credit of this wonderful transformation belongs to an extensive proprietor in the county, Mr. Coke. Mr. Coke had a large property in the west of the county, called Holkham, containing 30,000 acres. This immense estate, which is now worth six millions of dollars, was worth at most in 1776, when Mr. Coke inherited it, a million and a half. It was then in the occupation of a great number of small farmers, who paid their rents badly, although these were very low, and ultimately many of them abandoned their farms, because they could not get a livelihood out of them. It was then

that Mr. Coke decided upon farming a portion of these sandy lands himself, and the rest he put into very large farms, and leased them on long leases, to farmers of intelligence and capital. I should not omit to mention (as one purpose I have is to show New England farmers that they must employ capital in farming) that in the course of fifty years, Mr. Coke expended two millions of dollars, in improvements of various kinds, which caused the farmers to lay out about as much more—an excellent investment on the part of both, since they have all made money by it.

Any one who wishes to get an idea of this period in the history of English agriculture, ought to visit Holkham, the farm which Mr. Coke personally directed. Its extent is 1800 acres—500 of which are in permanent pasture, the rest is arable, laid out exactly for the four course rotation. The farm maintains 250 large cattle, 2500 South Down sheep, and 150 pigs. An equally profitable visit may be paid to other farms; but the same principles everywhere prevail followed by the same results. The whole land formerly grew only rye; now it raises not a particle of that grain, but instead are to be seen the finest wheat crops and the best cattle in the world.

The agricultural amelioration of Bedfordshire has been no less complete and rapid than that of Norfolk. Less than a century ago three-fourths of the county consisted of nothing but waste commons. These unproductive lands have been gradually divided, enclosed and cultivated; and owing to the four course system, now rank equal to the full average of English lands. The Duke of Bedford has realized an immense fortune thereby.

In Northamptonshire, adjoining Bedford, rents, during the last sixty years, have tripled from the same causes which have operated in Norfolk and Bedford.

Of the ten counties which compose the eastern region, the three last, Cambridge, Huntington and Lincoln, form a division by themselves—the fens. In looking at the map of England, we observe a large bay running into the land at the north of Norfolk, called the Wash. All around this muddy bay, the land is flat, low, and was constantly being covered by the sea. These marsh lands, at one time uninhabitable, now rank among the richest meadows of England. Situated opposite Holland, they have, like that country, been reclaimed by means of dykes. The area of these three counties is about 2,500,000 acres, of which the fens, properly speaking, occupy about a third. The lands reclaimed are already intersected with roads and railroads, towns have been built and farms laid out upon them. These once submerged lands are let at a rent of \$6.25 to \$7.50 per acre. Cereal and root crops are occasionally seen on them; but the most part is in grass, on which are fattened short-horned cattle and sheep, a cross between the old Lincolnshire and the Dishley.

All the north of Cambridgeshire forms part of the fen district. The average rent has doubled, within the last forty years. The southern part, in which clay soils predominate, is not in so satisfactory a state. Huntington, the county of Oliver Cromwell, has nothing in an agricultural view, to recommend it to our attention.

Lincolnshire, which a century ago, was more sterile and waste than Norfolk, now disputes the palm with that county in agricultural develop-

ment. Fens occupy the south and east, wolds and plains the north, and moors the west of this county. The fen district goes by the name of Holland, which it much resembles. The advancing dykes, which gain more and more every day from the sea, are the same, the meadows the same, and the flocks nearly the same; the country is low and wet. Rents average \$7.50 per acre. The wolds are dry and bare upland, with a calcareous subsoil, which the four course system has entirely transformed. These wolds are now rented at \$6.25 an acre. The moors, now called Lincoln Heath, were at one time more barren than the wolds; but now the change there is not less great.

Large farming, as well as large property, flourishes in the wolds in Lincolnshire. We find farms of 1000, 1500 and even 2000 acres. Such farms grow from two to five hundred acres of turnips, a like extent of barley or oats, as much clover, and equal extent of wheat. The farmers are almost all wealthy, and live in a liberal style. Lord Yarborough is the wealthiest and most efficient proprietor of this county, owning about 30,000 acres, yielding a rental of \$150,000. What a change in these once desert moors, where the traveller often lost his way.

We have now finished our journey over the eastern counties. I think my readers will concur with me, that we have not found in the eastern counties, as we did not find in the southern, a soil naturally superior to that of New England. In all that we have seen of England thus far, whatever the superiority of its agriculture, we are safe in saying, that this superiority is not owing to the natural superiority of its soil.

I might illustrate these remarks by showing various instances in which England has made great things of kinds of land, of which, as yet, we have made little or nothing. I confine myself to one instance, suggested by the fens we have just travelled over. We have large tracts of salt marshes on every part of our sea coast. They are generally composed of a fat rich soil, often several feet deep. These are our fens. But what have we made of them, compared to what England has done? They produce a crop of hay worth half the price of upland produce. I know attempts have been made in many places to dyke out the sea water, and in a few places most luxuriant crops have followed; but generally the lands have again run to waste, and the sea water again been admitted to cover them. Doubtless they are difficult to be reclaimed; but I doubt whether most of the experiments have not failed from being imperfectly made. Though the tide has been kept from overflowing the surface, the water within the soil has been kept too near the surface to prevent the soil being freshened. In one word, they have not been underdrained. Certain it is, that what has been done in England, can be done in New England. And one day in the hereafter, the best farms in New England will be found on its now neglected coast. M.

RURAL ECONOMY OF THE BRITISH ISLES.—In another column will be found No. 11, of the interesting series of articles, by "M.," a gentleman who has made some of the most expensive and valuable agricultural experiments that have yet been engaged in, in New England, and which we hope will

at some not distant day be made public. With great intelligence and close observation, he possesses a rare ability in expressing his own, or of giving the views of others in a clear, concise and happy manner. In a note to us communicating the numbers, he says—"They are collated from the work of a very acute Frenchman little known in this country, which has interested me very much." In an interview with the writer, subsequently, he gave us an account of the work of the Frenchman, Laverigne, and how he came to write it. No man has less occasion to resort to the labors of others than "M.," for his head and heart are full of knowledge and interest in the subject of agriculture, as will be evident before the series is closed. Perhaps an announcement of these facts with the first number published would have prevented any misapprehension, although the writer distinctly states that he is *collecting facts*, not originating them.

For the New England Farmer.

DE SOTO, WISCONSIN.

MR. EDITOR:—About a year ago, you inserted in your columns a communication from my pen, containing a statement of our location, climate, soil, future prospects, &c. On the strength of that communication, a large number of the readers of the *Farmer* located here, and others, not then ready to come, are renewing their inquiries this spring, with a view to ascertain our present condition and prospects. A brief statement will give your readers the information they need. Eighteen months ago, two log cabins and eight inhabitants constituted our town. We have now twenty-two dwelling houses, and over two hundred inhabitants; one steam saw mill; one store 25 feet by 60, three stories high, well filled with goods, at wholesale and retail, and said to be the best building between Du Buque and St. Pauls; one store, two stories high, containing a well selected stock of goods; one blacksmith and wagon shop; one fanning mill factory; one carpenter's shop; one school-house, and two organized churches. We have preaching ever Sabbath. Inquirers for information have demanded that I should be thus particular. In regard to our future prospects I will say a few words. There are now commenced, to be completed with *Western* dispatch, one large ware-house; one large three-story hotel; one block of stores, three in number, for rent; one store to be occupied by the builders; one wagon shop; ten dwelling-houses, and probably thirty more will be erected during the season. In regard to the departments of business unoccupied, a shoe store, embracing a manufacturing department for all kinds of custom work, is greatly needed; a watch maker; cabinet maker; harness maker; baker, tailor, stone and brick masons and plasterers are wanted and will find inviting openings. A shingle machine; a furnace; a steam grist mill, and manufactory of agricultural implements, could not fail to do well. On the opening of navigation, a steam ferry-boat will run between our town and Lansing, Iowa, and will connect with a line of stages running east to Madison, the capitol of the State, where passengers going South or East can take the Milwaukee railroad. We had, at our levees

last season, about 200 steamboats, and the number will probably be double the present season.

Our flourishing little town has a back country of great fertility, and will be the shipping point for the surplus produce of a farming district of great extent. "Can government land be obtained?" No, only in small parcels. Second-hand farming land can be bought, within three miles of town, at from \$3 to \$6 an acre, unimproved; and at about the same price in the interior. Farms, partially improved, command from \$7 to \$12 an acre. "Who will be our neighbors?" An important inquiry, which I can satisfactorily answer—probably there is not another town in Wisconsin that contains a more desirable population than ours. Its proprietors have encouraged none but *American* citizens; and it has been their highest aim to have it distinguished for its temperance, morality and piety, and in these respects, it will compare, favorably with any town of the same size in New England. It is, in fact, a New England village, shorn of its loafers, transplanted. "Can you raise fruit here?" Yes. The apple, plum and grape grow here spontaneously. Of the peach I cannot speak confidently; probably it would succeed as well as in the same latitude in New England. The general reader will think me unnecessarily particular in my statements. I have been compelled to be so in answer to particular inquiries. The fare to our town can be more accurately ascertained in Boston. The route will be to Chicago, and Dunkirk—thence by steamer to our landing. Persons arrived here, last year, from Boston, in four days.

Respectfully, JAMES OSGOOD.
Bad Ax Co., Wis., March 24, 1856.

A SHORT TOOTHED RAKE!

Do you own one, Mr. Gardener? If not, you are still without one of the most comfortable, aye, and *profitable*, implements used in your business. For cleaning paths, where the autumnal leaves found a nestling place for the winter, there is nothing like a *short-toothed rake*. For raking the grass borders of paths, the *short-toothed rake* will accomplish the work in half the time that any other will. For finishing off the bed, just made to sow with small seeds, nothing will draw out the pebbles, the bits of stick or coarse manure, like a *short-toothed rake*!

What gives the house a more inviting appearance than a green door-yard, covered with a carpet more beautiful than the art of man can possibly devise? One that need not be taken in when it rains, and whose color is not injured, even if there be a little soap in the water. But it must be clean—no bones that Rollo has gnawed, no dead twigs from the old elm or chips from the wood-yard, must be left there. And here, too, the *short-toothed rake* operates like a charm; it insinuates itself into every little recess, holds all it gets, and supplies plenty of soft dead grass to mulch the rose tree, or favorite plum or pear.

And then on the lawn! We do not mean the amateur's lawn of an acre or two, but the little

sunny lawn of the common farmer or mechanic, who never dreamed of a regular lawn rake, with its curved back and capacious maw. On such a little lawn, it is the king among rakes, small as it is. So do not take our word for it, but get a *short-toothed rake*, and find a greater pleasure than ever in working in the garden, and a facility in accomplishing it, altogether unknown before you wrought with a *short-toothed rake*!

For the New England Farmer.

LITTLE THINGS:

OR, A WALK IN MY GARDEN....No. 7.

I have just been out to examine into the condition of my pear and plum trees. Everything here must be tied to a stake to keep it from being broken down by the snow. While extending my observations, I spied an apple on the ground that had passed through the winter without any other protection than a snow-bank. While looking at it, I was led to think of the causes of

THE SWEATING OF APPLES.

I have been led to suspect for two years past, that popular opinion was wrong in regard to apple sweating; and these suspicions have become much strengthened during the present winter. Last fall, I gathered my apples later than usual, and put them into my cellar earlier than usual, and during a *very warm day*. They did not sweat at all. Why not? Because I did not carry them into the cellar with a temperature much below the cellar itself, so as to condense the moisture of the cellar upon them. Will apples sweat in a sealed glass jar? I much doubt it, under any circumstances. Has any one ever tried the experiment? I remember a few years since, of filling a barrel in which brown sugar had been kept. The apples were brought from the orchard on a cold morning, and put into a room adjoining the kitchen. In a short time, a stream of water had passed the length of the room, from the moisture of the apples and the sugar. Now I may be wrong, all wrong; if so, will some pomologist convince me by direct proof from his own experience?

My conclusions.—Carry your apples into the cellar in the middle of the day, when they are warm and dry, rather than on some cold morning, for fear they will freeze. As I have got from the garden into the orchard, I will look at my various methods of

MANURING OLD TREES.

I doubt the economy of placing manure around the trunks of old apple trees. Come along with me, and I will give you my reasons. Here are two trees, very vigorous, bear well. Between them a large pine stump was dug up, nine years ago, and the cavity was not filled, but became a receptacle for the trimmings of the trees, from year to year, where they have decayed, and into which the roots of these have penetrated, and furnished abundant nourishment. Let us take the next two trees, yes, four of them. The soil is rather poor around, as is the case with those before mentioned. So I thought I would place some manure around the trunks, almost every year, but they have borne but few apples. Let us go still farther. Here are two trees whose roots extend twenty feet into a deeply

trenched and highly manured asparagus bed. These trees bear abundantly. Indeed, one of them bears every year, supplying me with cooking apples four months in the year. There stand several trees whose roots extend beyond the enclosure into the chip yard. These bear every year, or nearly so. If we now will look at the roots of an old tree, we shall find a few fibrous roots beneath the trunk, but the healthy, large, growing roots, will stretch off at a distance for support.

My conclusions.—If you have a wheelbarrow load of manure of any kind, dig a hole eight or ten feet from the tree, and bury it up, and you need have no fears that it will be lost. But what is the matter with those

YOUNG BALDWIN TREES.

They are dead; every one of them,—winter-killed. I believe that better success would attend the setting out of young orchards, here in Maine, if seedlings were allowed to grow until sufficiently large to be grafted into the tops. This was formerly practised with complete success. I do not believe that one-half the trees brought into Maine, for five years past, will ever bear apples. They are small, liable to be broken down by snow, or cattle, as well as to be winter-killed. Many become stunted, and worthless. The Baldwin, here in Maine, should be grafted only into old trees. To boast of a tree that will bear in a few years from the seed, is no gain at all. It never will make a great tree, no more than a pert boy, much above his years, will make a great man. The first scion I ever got, bore an apple the same year. This was seventeen years ago, and it has not grown, nor borne much since. A forced development will be of short duration, whether in man, beast, or vegetable.

My conclusions.—That I shall let my seedlings grow till of sufficient size to graft into the branches, transplant with care, graft the second year, and have a bearing orchard sooner, and at less expense, than my neighbors, who adopt the prevailing method.

N. T. T.

Bethel, Me., April 15, 1856.

For the New England Farmer.

SUPERPHOSPHATE OF LIME.

MR. EDITOR:—Having been induced by the many flaming commendations of the Superphosphate of Lime, which have appeared in most of our agricultural papers, to experiment a little with that article, I consider it but fair that others should have the benefit of my experience.

On a greensward field plowed deep, finely pulverized, and manured at the rate of about twenty loads per acre, I applied De Burg's No. 1 Superphosphate to corn, putting in each hill with the seed as much of the fertilizer as could be dipped out with a common table spoon. Part of the field was treated in this manner, to a part plaster was applied, and a small corner left without either. At no time during the season could the slightest difference between the three portions be perceived. Soil a warm, rich loam.

To another field, broken up the fall previous, otherwise similarly treated, but having a soil not quite so light or warm, I applied the Superphosphate, with the exception of a small portion left without. Result the same.

I also applied it to potatoes in the same manner

and quantity. They were planted on old ground, warm and dry, part treated with Superphosphate, and part with plaster. The crop—as well as the corn—was good, but no difference in favor of the Superphosphate.

A neighbor of mine made similar experiments, with like results. The year previous, he made almost all sorts of experiments with Peruvian guano, and never could discover, *from its effects*, where he had but it.

The conclusion to which these and other experiments have brought us, is that although *amateur* farmers may, with these much vaunted fertilizers, produce some fancy (or *fancied*) results on your sterile Massachusetts soils, yet up here in cold Vermont, (where we have milder winters than they do five hundred miles south of us,) nature is altogether too fast for them.

F. A. D.

Rulland, Vt.

MELONS.

Melons of all kinds require a light, warm and rich soil. That which seems best adapted to their growth, is a light sandy loam, with a pervious subsoil, and a texture susceptible of easy disintegration and fine tilth. Pasture lands of this character usually produce abundantly, if limed or dressed with house ashes. They should be broken the previous year, say in August, and if practicable, on a wet day, and allowed to lie fallow. The next Spring they should receive a good dressing of well decomposed manure, which should be worked in and incorporated thoroughly with the soil, and the seed planted in hills not less than six feet apart. Some recommend eight feet as the proper distance between the hills, but this we consider as useless waste of soil, six feet being space enough for the largest and most luxuriant vines. Some gardeners prefer sheep manure for the hills, allowing from one to three bushels to every plant—the number preserved in each hill. The strong tendency, however, of this manure to ferment violently, and the consequent speedy evolution of the fructifying gases before the plants have attained a development sufficient to prevent their waste by assimilation, renders it less efficacious than that in which the economy of fermentation is less rapid and energetic, unless indeed it be applied after the plants are fully developed, and in a condition to appropriate rapidly their pabulum. Like all plants with broad leaves, the melon is not severely affected by moderate degrees of drought. It stands a sharp drought better than most vegetables, but when fruiting the preservation of humidity occasions a shrinking of the fruit, and circumscribes the productiveness of the vines. Irrigation is frequently resorted to at this season of its development, and always with beneficial results. Soap suds is the best article that can be used, probably, for this purpose. It contains the food of plants in a state of perfect solution, and induces a healthful and rapid growth, besides acting as a remedy for many diseases to

which vines of the culmiferous class are subject towards the close of the season. Urine, in which gypsum has been mixed, is also a good article for invigorating melons, and other vines of a similar kind. It should, however, be permitted to ferment, or be greatly reduced with water before being applied, as in its fresh state it would prove rather detrimental than otherwise to the vines. Water from the barn-yard, which is rich in carbonaceous matter, and saturated with various fertilizing salts, tends to urge forward the growth, and induce a more liberal development of fruit.

For the New England Farmer.

THE PAST WINTER.

In the course of the winter I had occasion to pass three times over the road from this place to Canada West, and I often heard it remarked that *such a winter was never known*. A similar remark is made almost every year, and to a certain extent, it may be true. If we compare any number of years, perhaps we shall find no two *exactly alike*, yet there is a general similarity.

True, the past winter was one of almost uninterrupted cold weather, but the temperature was much more equable than in some others, the extreme being several degrees nearer together than in the winter of 1854. In one particular, however, it *was* remarkable. From the 23d of the 12th month, to the 14th of the 3d month—76 days—we had no thaw in this region. In the night of the 11th of the 2nd month it rained at Boston, but at this place, and in the same latitude several hundred miles west, scarcely rain enough fell to be perceived. The snow on the south side of roofs frequently melted, but it did not soften in the road by the influence of the sun, during the above named period.

The usual "January thaw" was completely lost. Water was very low; many wells which afforded water throughout the dry summer of 1854, entirely failed.

Snow at the South and West was much deeper than usual, but in this vicinity it was not so deep as it frequently is, though as far as I have seen or heard, it was drifted as much as ever. The wind blew almost incessantly about *six weeks*, and an interdiction seemed to be laid upon travelling, although from an article which appears on page 159 of the current volume of the *Monthly Farmer*, over the signature of "C. Goodrich," we might infer that northern Vermont presented an exception. I think his travels did not extend beyond those good *side-walks* of which he speaks, and that his knowledge of the regularity with which the cars run from Burlington to Rouse's Point must have been based upon "*hear-say*," or he would hardly have made such assertions. I should not have called his statements in question if I had not had some experience in travelling on that road.

The 12th of 2nd month last I went from Franklin, N. H., to St. Albans, Vt. The train was due at St. Albans 10 minutes before 8 o'clock, P. M., but we did not arrive until *nine*. A gentleman from Boston, then present, informed me that he went over the road three weeks before, and did not arrive until midnight. I also learned that for a considerable time the cars had been an hour or more

"behind time." The night was very cold and windy, and the next morning the train from Burlington was *half an hour* late, and we were detained an *hour and a half longer* in consequence of the snow which had blown into the road during the night, making us *two hours* late at Rouse's Point. But friend G. says "the cars have not been detained one minute by snow."

The pages of the *N. E. Farmer* will probably be read by future generations, and it is a matter of importance that they convey correct information.

Snow, except the large drifts, is nearly gone, but the weather is dry and cool. We had some light showers the 12th inst., but it froze hard in the night. In the morning of the 13th the mercury fell to 20°, and it did not thaw in the shade during the day.

Robins and Blue-birds were seen here the 3d, and we have now a pretty full choir of vernal songsters. The season for making maple sugar appears to be nearly closed, and the bare fields, and pleasant mornings, remind the farmer that another busy season has arrived. L. VARNEY.

Sandwich, N. H., 4 mo. 17th, 1856.

For the New England Farmer.

POTATOES FOR PLANTING.

I notice in the agricultural papers that a difference of opinion still exists as to the relative value of large and small potatoes for seed. Most of the speculative writers on this, as well as other subjects, appear to have formed their opinions on the result of a single experiment. No wonder, then, that their experience leads to different conclusions. Every man of but slight observation knows that in some seasons, with weather apparently favorable, certain crops will be light, and the reverse in other seasons. These results will be further affected in different soils, and under the same treatment. Even in the same season, apparently in similar soil, and under the same treatment, wide results are noticed. It is no uncommon thing for the production of one hill of potatoes, for instance, to be double that of other hills in the same lot, with no apparent difference in seed, soil or treatment. Hence, no safe inference of a general rule can be inferred from a single experiment in the same season—much less when the experiment embraces two seasons. I am led to these remarks on reading a communication in the *Farmer* from Bridgewater, Oct. 22d, signed H.

From my experience and observation, I am convinced no certain inference can be formed of the relative value of seed of any kind, or of manure, or of treatment, from a single experiment. The result may be materially affected by numerous causes hidden or apparent. I do not think the mere selection for seed of large or small potatoes affords any test at all, without reference to the circumstances whether the small are unripe, late productions of a species of larger size, or the mature dwarfs of the same, or are the production from small or large seed for a series of years, or of one year only. The effect, if any, between large and small seed will not be fully developed at once. A series of experiments pursued for many years, by planting the small potatoes, raised from small seed, and large potatoes from large seed, will alone be of any value in deciding the question. Sixty or seventy

years ago, there was a species of potatoes generally cultivated, of a blue color, very excellent, but not large, though they yielded pretty well in the great number in a hill of small ones. Of course the larger ones were picked out through the winter for family use, leaving small potatoes for seed. For that, or some other reason, the crops became light, and but few produced large enough to cook. My brother, who occupied the farm on which I was brought up, commenced selecting his seed in the fall, when harvesting his potatoes, and other farm productions. He selected the largest of the blue potatoes for a series of years for seed, and planted no small ones. The result was, that in the course of fifteen years or more, these blue potatoes produced much larger crops, and much larger potatoes, instead of having the variety run down, as it is believed by many, all varieties will in that time. But another unexpected result followed. We all know that the over large potatoes of any variety are not of so good quality as those of a medium size. By selecting the largest, my brother necessarily selected those of inferior quality, and by raising from them, he not only got tubers of improved size, but of superior quality, and thus materially changed the variety, both for quality and productiveness. I have known the productiveness of corn materially changed in the same way; not in a single year, but in a long series of years, though the change in a single year was scarcely perceptible.

RUFUS MCINTIRE.

For the New England Farmer.

ROAD-SIDE SHADE TREES.

FRIEND BROWN:—Are you not often forcibly struck at seeing or experiencing the comfort of some old shade tree on the road-side in your pedestrian walks or drives through the country? What, but a good old elm, ash, walnut or chesnut, gives grace and beauty to a farmer's dwelling? To the stranger, it attracts the eye and leaves pleasant recollections. To the scattered family in far off climes, what clustering reminiscences, identified with every leaf that unfolds itself. The music of the oriole, its ingeniously wrought nest hanging on the waving limb, like a reticule upon a lady's arm; the old swing, that chilled with fear, and dizzied the brain of innocent childhood; how like magic the mind rushes back to the old shade tree that waves its branches over the maternal, the ancestral home. Nature's knife cuts away no such revered tie. Time enshrines it, as the back-ground and picture of pleasant memories.

But I am forgetting my task. Farmers, landholders, all,—trees by the roadside add value to your property; to this you will not object. They add beauty to your home, and comfort to the traveller. The time and cost in planting, how insignificant on this small portion of your premises. Your own forest will furnish them all. The cherry is a rapid grower, almost sure to live. In a few years this would furnish fruit for the poor, and food for birds. Opposite your fruit orchards, to avoid shade, put out the maple, ash or walnut. We notice some have an idea of the ornamental, by misplacing forest trees inside of the orchard fence. This is the proper place for fruit trees, which should be set ten feet from the wall. Shade trees have a more becoming appearance outside the wall, and at such distance from it as to give shade to the road.

How charming the prospect in passing through the towns lying along the Connecticut river, with their lofty, shading elms. Two men and two days' work upon every farm, in planting forest trees, would add much to the rural beauty of the farm, the pleasure of the traveller, and very little expense for so praiseworthy an object. Friend B., can you not propose some plan of association for this object? You wield an efficient pen; allow us the pleasure to hear from you.

Yours truly,

H. P.

New York, April 21.

REMARKS.—There—if that appeal, with all the delightful associations it has awakened, will not arouse every man, woman and child, to *plant a tree*, we know not what will. We are not all idle, friend P., nor forgetful of the comforts and charms of an old tree. Associations, as well as individuals, all over Massachusetts, and we hope, New England, are engaged in the good work of planting.

MONEY AND MATRIMONY!

Every week, we are invited to publish advertisements of one sort and another, to raise money, or obtain a wife, in a manner not consistent with the principles upon which this paper is conducted.—Sometimes an important mechanical secret is to be divulged, at others medicinal, and now, with the cash enclosed, it is to help a disconsolate wight to obtain a wife! In *this way* we cannot do it. But *privately*, we would inform our unfortunate friend, he may, perhaps, get a little courting done by proxy, if all that he sets forth in his bill is correct. We want money, and we like matrimony, and are always willing to help an honest man to either in an honest way, provided he will put his own shoulders to the wheel and try to help himself. But, as we have often done before, we return the letter and money to L., and advise the writer to put on his "go-to-meeting-suit," and make a desperate adventure among the fair ones in his own proper person.

"There swims no goose so gray, but soon or late
'Twill find some honest gander for her mate."

The sentiment is just as good reversed, friend, so take courage, and "make an effort."

For the New England Farmer.

HORSES AT CATTLE SHOWS.

MR. EDITOR:—Unwilling to train in *borrowed plumes*, and having been charged with writing the article in your paper of the 12th inst., on "Horses at Cattle Shows,"—I beg leave to disclaim entirely all knowledge of, or connection with said article.

Although I am an admirer of fine horses, in their proper places, I am not in favor of exhibiting *fast horses*, at our shows, or of trying their speed, either on the public ways, or in adjoining enclosures, on these occasions. The experience of the last year in Essex in this matter, should operate as a *velo* on all such movements. I forbear to say more, hoping that our exhibitions will continue to prosper, in the use of their sober and legitimate purposes.

ESSEX. *Senior.*

TRAINING AND PRUNING.

Much has been written and said upon this subject—enough, one would think, to satisfy all who have the work to do, to perform it properly. But such is not the fact, as persons of observation may see in every ride they take in the country. It is a severe loss to the farmer to purchase fifty or a hundred trees, plow and manure his ground, plant the trees and tend them with care for a dozen years, and then ruin them, or reduce their lives one-half; poor, mutilated, dying things, before they have arrived at the common age of maturity.

There is such a veneration for old customs, that men insist upon pruning in the months of March, April and May, and continue in the practice, though they constantly complain that their orchard "does not do well, and that *something* is the matter."

Two trees have grown up under our eye, standing within thirty feet of each other, both crooked, low-limbed, mis-shapen trees to begin with. Now, at the age of ten years, one of them, judiciously tended, is



A WELL-SHAPED TREE.

The tree itself appears far better than the idea given of it in this engraving. Its trunk is straight, all the limbs having plenty of room, and large and vigorous, while the top is compact, with a symmetry and grace which at once attract the beholder. When such a tree is full grown, its top may be travelled over with ease to gather the fruit, and with little danger to the person or to the tree itself. The main branches coming out as they do at nearly right angles with the stem, may drop their extremities to the ground without being injured, and are rarely broken by the wind. When this tree was purchased from the nursery, the first limbs came out *three* feet from the crown of the root—they now

stand at nearly five feet, yet there is no wound to be seen where the first set were taken off. We have no doubt that apple trees bear more fruit, and are less liable to be broken, where they are trained with short stems. But if *cultivation* is important, they must be carried higher.

The tree represented below, was, to begin with, as handsome as the other; it has been cultivated and tended the same, but has been trained more in accordance with the old notions of pruning. It is evidently



A TREE WITHOUT GRACE OR SYMMETRY.

These trees were sketched by one of the best artists in this city, and give a fair but not exact representation. The first one does not appear so well as the tree itself, and the second is slightly caricatured.

We have often given our ideas of pruning, and cannot do more than to give merely an outline now. Never cut off a limb of more than half an inch in diameter in the months of March, April or May; but cut in June, October or November, and always cover the wound, even of small limbs, with gum shellac dissolved in alcohol. Cut out where limbs cross, or where they incline too many of them to the inside of the tree. Do not cut off the young side shoots and leaves in the growing season, as they are placed there to elaborate the sap, and will increase the growth of the tree.

As a general thing, *too much* pruning is done to young trees. If started judiciously, they need but little, very little trimming, annually, so that if the owner of a young orchard has an uncontrollable desire to use his knife, he had better supply his pockets with several pieces of soft pine wood, before he takes a stroll through his orchard. Prevention is better than cure.

THE FARMER'S HOME.

We have really but few farm houses and farm barns that approximate that style of architecture or utility of arrangement so essential to pleasing effect and to the highest comfort and convenience of the occupant.

I would not urge the farmer to an extravagant outlay for a house to live in, but I would have him keep in view neatness of appearance, comfort and convenience.

Every one knows, who has them, what inconvenient houses and barns are; but once built, it is no easy matter to improve them; if ever undertaken, they are seldom put right. It is in building as in every thing else, always cheapest in the end to begin right.

Every man's house should be a *house* in the broad and best meaning of that word; neatness and order should be the presiding divinity of the place. This cannot be unless each part shall have a corresponding fitness to every other part.

The grounds should be more ample and better arranged than is generally common, admitting of such an arrangement of out-buildings as will add to the convenience and general appearance of the whole.

No farmer's house is a comfortable home if crowded to the line of the highway in front, or closely attacked by pig-styes and bird-lofts in the rear. There should be room, also, for ample shade. *Sylva* is the fair Goddess that sheds her choice blessings on him who leads a rural life, little less than *Ceres*, the annual draught from whose horn is so grateful.

The barns of the farmer should be constructed after the most utilitarian model. While it needs a combination of utility and nice taste to plan and construct a home that shall be worthy of the name, it requires not a less combination to construct a set of farm-barns. The health and thrift of stock will depend much upon the comfort and convenience of the stable arrangement. Facility for performing the labor in and about the barns will be greatly increased, by constructing every part only after the best model. Housing of manures is an important consideration with every farmer, and should not be overlooked in laying plans for farm buildings in which stock of any kind is to be kept.

In short, every thing about farm buildings should be commenced right from the foundation, if we would have what is really desirable, and that shall best subserve the purpose intended.—*Western Farmer*.

BUILDING CISTERNS.

Eight years ago, while building my house, I dug a hole seven feet deep, six feet in diameter at top, three feet at centre, sloping the bottom like the large end of an egg. The soil where made, mostly clay in composition. Used equal parts of water-lime and coarse, clean sand for covering. After it had dried, coated thoroughly with a white-wash made from cement to fill any cracks occasioned by the drying process. Laid three pieces of white-oak scantling across the top with a covering of two-inch plank matched together, and a trap-door to admit ingress for the purpose of cleaning it out as occasion required. Where cisterns are thus constructed, the first filling of water should be pumped out. After that it will be as soft as though caught in a barrel. It matters not what the soil

is, if it but holds its shape till the mortar sets. I have seen them dug in a bed of sand with good success. It must not be allowed to freeze.

My cellar bottom is composed of the same material, with this difference: one part cement with two of very coarse gravel. I think five barrels of water-lime sufficient for a cellar 24 by 40 feet, one and a half inches thick of mortar. Make the bottom of the cellar a little convex. Put the cement on with a trowel. In a few weeks you have a bottom as hard as a rock. In hot weather throw on cold water and scrub off with a broom; the water will run off the edges into the drain, and you will have a sweet, cool cellar in the hottest weather. Observe the same caution as with the cistern, viz., keep out the frost.—*Rural New-Yorker*.

For the New England Farmer.

A VISIT TO SIMPSON'S GRAPERY IN SAXONVILLE.

TALK AT A GREEN-HOUSE COLLATION.

MR. EDITOR:—While visiting a green-house graper, during the past month, some interesting subjects were discussed relative to the physiology of the growth of the grape vine, and on the functions which different parts of the plant play, in their progress of growth and of fruiting. Some of these thoughts may not prove wholly uninteresting to the general farmer or to the grape grower, and I shall therefore report them for their consideration.

The great object of nature in the formation of fruit, is reproduction of the plant by seed. This is the strongest vital effort of the plant. The pulp of the grape and the flesh of the peach, plum, apple and pear is placed around the seed, not only as food for man and animals, but also for the purpose of inducing them to transport the seed to other spots of earth, where they may be cast upon the ground and grow. The winged thistle-seed, and the feathered seeds of the maple and pines, obtain their locomotion by aid of the wind, and the oily and nutritious nuts and acorns find a planter in the ever active squirrel, who plants thousands for one that he opens and eats. Thus this nimble animal, by his instinct, is forced to become nature's planter of forests of oaks and of walnuts, and some species, especially the red squirrel, rejoice in lugging away and planting the white pine cones.

Birds distribute the seeds of berries profusely over the plains, and aid their growth by a guano dressing as they drop them on the soil. The burr sticks to the wool of sheep, to the hairy coat of cattle, and to the clothes of man, and thus finds its means of gaining a new location and soil. The cocoa nut floats on the river and even on the sea, and is wafted to distant islands. Every plant has some method of sending its seed abroad. These facts must strike every observing mind as the provisions made by the Author of Nature for distributing his vegetable productions over the earth.

The seed—and what is it? It contains the embryo plant, and the nutriment required for its early development, its mother's milk in its most concentrated form; it is analogous to the egg of a bird, containing the embryo and the nutriment the young animal requires before it can shift for itself. The seed contains around the germ, what is styled by

botanists, its mucilage or albumen; around this is laid up in most seeds a quantity of starch, a substance readily changeable into gum, and then into sugar, by the action of the albumen, which forms, by chemical changes, the principle called diastase. In other plants an amygdalaceous substance takes the place of starch, and undergoes peculiar chemical changes in the process of germination. In the bean pea and in cucurbitaceous plants, such as the pumpkin, squash, cucumber and melon, it changes into organized cotyledonous leaves, as it pushes from the soil and meets the light. In cereal grains we have the mucilage in the chit, then the layer of starch mingled with cellulose, and around this a hard substance called gluten, containing a fixed oil in cells. This is more observable in the grain of Indian corn. This gluten, which is the last of the ingredients to decompose in the soil, furnishes ammoniacal products. The starch forms first gum and then grape sugar. The phosphates are all contained close around the germ in the chit or mucilage. All seeds are formed on similar principles, and there is a grand unity in their plan.

The seed of the grape is richly supplied with phosphates and with the alkalies, potash chiefly, with some soda. It bears also the organic nutriment of the embryo vine. The production of these little seeds, or grape stones, as they are called, is the most elaborate performed by the plant, and during the process, the grape ceases to swell, and becomes almost stationary in its functions of growth, so far as the eye can discover. Its whole energies are bent on perfecting of the seed. This accomplished, then the grapes undergo a sudden change, and begin what the cultivator calls the second swell of the fruit, when it becomes full of juices, which change by ripening into saccharine and aromatic syrups, tempting the palate of man. If, in out-door growth, there happens to come on a few rainy days, the grapes swell quite largely, but are not so sweet as if less liberally supplied with water. Hence, the judicious gardener takes the hint from nature, and wishing to produce more concentrated saccharine, and higher flavored juices, is sparing in his supply of water to the roots; and if he understands vegetable physiology, he is not guilty of the barbarism of plucking off the leaves from his vines, by which he would in part, at least, defeat the elaboration of the sap, which is forming the sweet juices of the grape. It is an error to remove the leaves under the belief that by so doing more sunlight may come to the bunches of grapes. It is on the leaves the sunlight must fall, to produce the proper elaboration of the sap. Every boy who has picked wild grapes in the swamps, knows that only sour grapes are found on branches that have lost their foliage. To pluck off the leaves from a plant, is analogous to the removal of the lungs of an animal, and the diminution of them is like the destruction of a portion of the lungs.

The circulation of plants was next discussed. By what power does the sap ascend in the stem?—Is it by capillary attraction? Is it by attraction of the buds? These were two of the old botanical theories. If by capillary attraction, allowing it to be equivalent to the production of a perfect vacuum, it can only raise the sap from 34 to 40 feet, and if it is assumed to be owing to the attraction of the buds, the same objection stands in the way, viz., that it will not account for the elevation of a column of

sap from 100 to 200 feet in our tall trees and high climbing vines.

The sap must then ascend by a *vis a tergo*—or rather, a force from below,—and this force we find in the beautiful discovery of M. Dutroch of *endosmose*, or internal impulse. If we tie a piece of bladder over the mouth of a small jar or cupping glass, open at the bottom, so as to make a false bottom to the jar by the membrane, and then fill the jar with a syrup of sugar, or any fluid denser than water, and attach an open tube to the neck of the jar, and then sink the jar to its neck in water, it is obvious that there is no difference of pressure between the inside and outside; still in a quarter of an hour it will be observed that the fluid rises in the tube, and will continue to rise until it overflows at its upper opening. Now this membranous bottom is equivalent to the spongione or the rootlet of the plant. But if we add a series of diaphragms in our tube, instead of obstructing the ascent of the liquid, they will each give it a lift, and so it will go on ascending to the highest part. In the stem of a plant are myriads of these crossing diaphragms, and each one of them tends to lift the sap upwards, while some of the lateral ones direct it to the glandular apparatus of the plant. The evaporation from the leaves continuously inspissates the liquid sap, and it becomes more and more *endosmetrical*, as it becomes denser by this process.

In winter and during the rest of plants, the sap in the roots becomes denser, and is ready with the return of warmth and moisture to absorb water and saline and soluble organic matters from the soil.—When the sap reaches the green buds, they swell and put forth their leaves; these leaves are acted upon by sunlight in such a manner as to effect the most marvellous chemical changes in the sap; carbonic acid gas from the air is greedily absorbed by the leaves, and oxygen gas is exhaled in its place. This carbonic acid gas, the poisonous breath of animal respiration, and the product of combustion of carbonaceous fuel, is changed into the proper juice of the plant,—forms gum, sugar, and many other of the ingredients we find in the fruit. In the chemist's laboratory, red hot potassium is required for the reduction of carbon from carbonic acid, but in the finer chemistry of plants, this decomposition is slowly and silently effected, without the dazzling red blaze of the chemist's experiment. Not only is the carbon of wood produced, but also an infinite number of hydrocarbonaceous substances, inimitable by the chemist, and organic substances which vegetable life alone can produce, are formed. So rapid is the absorption of carbonic acid gas by fresh and healthy foliage, exposed to full sunlight, that according to Dumas and Cahours, if a branch is inclosed in a glass globe, and a blast of air is driven through it by the bellows, all the carbonic acid is abstracted from the air by the foliage.

It was formerly supposed that plants produced carbonic acid during the night, and hence the idea of Virgil, that the evening shade is unfavorable to singers was supposed to be justified by this botanical view of the matter. But more exact researches have shown that plants do not produce carbonic acid, but only allow that which they absorb from the earth to pass their stomata or breathing pores of their foliage.

Years ago, while encamped in the unbroken forests of Maine, I often reflected upon this physiological theory of the older botanists and chemists, and

could not reconcile it with the fact, that, although encamped amid deep groves, and all covered with green leaves, we enjoyed the most perfect health. Modern researches have corrected this erroneous theory, and it is now known that the sum total of the action of a plant in confined air, is to remove its carbonic acid, and to replace it by pure oxygen. Hence, the fears of some persons, of injurious effects coming from the growth of plants in a sleeping-room, are unfounded.

In the absence of sunlight the leaves of plants droop, and they are said to sleep in the night. It is true they do not elaborate the sap, as they do under the influence of sunlight, but the circulation of the sap goes on still, both by night and by day. In the green-house, the lower temperature of night should be imitated by reducing the heat of the furnaces, and it is well to bring the temperature down to 50° or 60° F., while in the daytime it may be carried to 80°; and perhaps, if moisture is abundant, still higher. Heat undoubtedly hastens the circulation of the sap, while the sunlight causes the leaves to elaborate it. When there is no sunlight there is less necessity of heat.

When a plant has formed its fruit, it ripens it and the wood, and at length begins to form its buds, the foliage dropping from the stalks. When these processes are completed the work is all done, and if cold comes on, the vine takes its winter's rest. Or the grape-grower, like Mr. Simpson, substitutes a tropical dry season for a winter, and puts his vines to rest in midsummer. He has lately become more daring in his theories, and questions the necessity of any season of rest to the vine after it has made preparations for a new growth by perfecting its wood and preparing its buds, and thinks the vines may, by proper treatment, be at once set at work again. This theory, however, requires a practical verification before it should be adopted, for there may be processes necessary to the health of the vine which take place in its glandular apparatus during the period of repose. The experiment is one worthy of a careful trial, but it will require several years' time to test it. It may turn out that the period of rest is merely one of fallowing of the soil about the roots of the vine. If this is the case, and the plant itself needs no more rest, then it will be easy to apply the matters required in the soil, so as to have all ready in a moment, that four or five months' fallowing would produce. It would be practicable then to have grapes ripening every month in the year, without a very great number of vines. Green-house culture is destined to become more than a mere expensive luxury. Window glass can now be produced as cheap as shingles, and iron sashes may be made at a low cost, so that good and permanent green-houses may be constructed, in which the most desirable vegetables and fruits may be grown in winter as well as in summer, and to an extent far beyond that which has thus far been attained.

By having a number of green-houses connected, it is possible to economize the heat of the fires, by passing the heated air from one room into the other, and employing graduated temperatures in them all; and by having a sufficient number of rooms, to raise large crops, the constant employment of several gardeners and laborers in their management could be afforded.

There is room for improvement in the construction of green-houses, and in rendering them less

liable to the accidents of frost in winter, and probably improvements may be made in the embankments, and in heating the borders. These, however, are questions to be considered by practical gardeners, rather than by the chemist and physiologist.

C. T. JACKSON, M. D.,

STATE ASSAYER, &c., 32 SOMERSET STREET.

Boston, May 1, 1856.

For the New England Farmer.

THE FARMER'S LIFE.

BY H. D. WHITE.

I love the farmer's quiet life—

His peaceful home devoid of strife,

With sweet contentment blessed;

I love the virtues of his heart,

Which peace, and joy, and love, impart

Around his humble rest.

I love the scenes of social mirth,

That brighten round his evening hearth,

With joy unmixed, replete;

Where friendship's smile, and love's sly leer,

Are seen through joy's transparent tear,

And true friends only meet.

I love the labor and the toil,

That clothe with beauty Freedom's soil,

Where despot never trod!

And where each task, from turmoil free,

Great God, is sanctified by Thee,

And consecrates the sod.

I love the bloomy hills and dales—

Their healthful winds and odorous gales,

Untainted by disease;

I love the tales and legends old,

By white-haired sires at twilight told,

'Mid scenes of shadowy ease.

I love whatever the seasons bring,—

The flowers that blush—the birds that sing,

Eve's low Eolian breeze,—

The vernal smiles—the Summer's charms—

The Autumn's fruits—the Winter's storms—

All charm in their degrees.

Windham, Me., 1856.

For the New England Farmer.

PLASTER OF PARIS.

SIR:—I am aware that gypsum or plaster of paris is extensively used by farmers throughout the United States, and in Great Britain. Our island abounds with it, in almost every creek and harbor, and yet none of our farmers use it in any shape; probably, they do not know its value, or how to apply it to the soil. Will you or some of your correspondents be kind enough to furnish the following information respecting its use and application?

1st. Is it generally used in its raw state, or burnt into lime?

2d. What kind of soil would be most benefited by its application?

3d. Is it mixed with compost and plowed in as a fertilizer?

4th. What is the best time to apply it to the soil for grass?

5th. What is the average cost of the mills used for grinding it?

A SUBSCRIBER.

North Sydney, Cape Breton, April 12, 1856.

P. S. Some plaster is white, and some light blue: the latter is the hardest, which is the best?

THE GARDEN.

Every farmer, every mechanic, in short, every individual of whatever standing or profession, should have a garden. There are few who are so circumstanced as not to be able to procure land for this purpose. If a farmer, owning your hundred or two hundred acres of land, you can of course devote as much of your premises to the cultivation of vegetables, fruits and flowers, as your preferences may suggest, or you can have your front garden, your flower garden, and your garden for the cultivation of the more substantial productions; and you can have each so arranged and managed as to subserve the purposes of both ornament and use. There is nothing derogatory in this business, even to the loftiest intellect. Let those who cavil at this assertion, and look upon gardening as a plebeian vocation, look at Domitian pointing exultingly to the cabbage he had cultivated,—at the immortal Cincinnatus, called from the peaceful cultivation of his three *jugera* of soil, to command the armies of imperial Rome; at Washington and Jefferson, Calhoun, Webster, Clay and Van Buren, as well as many other illustrious warriors, philosophers and statesmen, both of the past and present day.

The mechanic who is tied down to his seat or bench during the long and wearisome day, and whose sedentary avocation renders a certain degree of active exercise essential to health, will find the garden an excellent theatre for the relaxation both of mind and nerves. Here pleasure and the pursuit of health may be combined with profit, and the increase of blessings rendered equal, or nearly so, to that of his "working hours."

To every sedentary person, whether mechanic or lawyer, minister or "man of pleasure," we would say, unhesitatingly, plant a garden. Have some vegetable growing upon which you can bestow your hours of unoccupied time, your periods of leisure and lassitude, and thus escape that terrible *ennui* which is ever the cause of the idle and unoccupied. No man can be happy or healthy without some employment—something to stir his blood and send it in healthful currents through his veins. The more open and regular this exercise, the more healthy and happy he will be.

—"Ye fostering breezes, blow!
Ye softening dews, ye tender showers, descend!
And temper all, thou world-reviving sun,
Into the perfect year! Nor ye who live
In luxury and ease, in pomp and pride,
Think these last themes unworthy of your ear;
Such themes as these the rural Maro sung
To wide-imperial Rome, in the full height
Of elegance and taste by Greece refined.
In ancient times the sacred plow employed
The kings and awful fathers of mankind."

RANDALL & JONES' HAND CORN PLANTER.—The reader will find an advertisement concerning this implement in another column. We first heard of it, standing in the midst of the most beautiful field of corn that we saw, in the autumn of 1854.

It was on the farm of SOLON CARTER, Esq., of Leominster, who said the field was planted with this machine, and that he considered corn dropt close, better than to have the kernels spread apart. The doctrine sounded strange to us, but on inquiry we found many people agreeing with Mr. Carter. Last year we dropt our corn close, and shall continue to do so, liking the plan better than the old practice.

We find the following letter from Mr. Carter, among other testimonials of the implement.

Leominster, Jan. 24, 1856.

I used one of Randall & Jones' Corn Planting Machines, for dropping the corn on two acres of land, newly broken up, covering it with the hoe. I think it would have covered it sufficiently without the hoe, as I used it to plant half an acre, on which the hoe was not used. This came up well, and more even as to number of stalks in the hill, than common hand dropping. The general objection made to the machine, that it leaves the corn too close together, is not, in my opinion, an objection, but an advantage, as the rows can be cultivated nearer together than otherwise; it is also less work to hoe with the corn planted close than with it spread, especially where the land is weedy.

SOLON CARTER.

For the New England Farmer.

DOUBTS AND DIFFICULTIES.

MR. EDITOR:—I have read with much interest the report of your Legislative Agricultural Meetings, as published in the *Farmer*, but as yet with more amusement than edification. Why is it there is such a diversity of opinion entertained by those of equally high agricultural attainments on almost every subject under discussion? Their opinions, whether correct or otherwise, are widespread, and thousands here in N. H. read the weekly reports of their doings in quest of information. But who can know the truth when doctors disagree? One says that peat or meadow muck is the *only* substance to be depended on to renovate our farms and bring them back to their primitive productiveness. Another says it is *valueless*, or not worth the trouble of drawing—compost, stable-manure, lime, plaster of paris, guano, &c., &c., all have their advocates and opponents relative to their comparative value.

Now, Sir, in charity, I believe all are right, or nearly so, and the whole difference arises from the diversity of soil they cultivate or the different methods of applying the manure. Unlike the broad prairies of the West, our N. E. farms, and even fields of the same farm, differ materially in soil, and require different cultivation. We are told by some, that we should bury manure as deep as possible with the plow, and by others that we should spread it on the surface, to produce the best results. Now we know that both cannot be right, relative to the same piece of land, and yet they may be as to different soils. The different kinds of soil even in N. E. are not so numerous that there may not be some established method for the cultivation of each, or at least some undeniable facts as starting points from which we may improve, and without which we seem to be groping in the dark, or sailing without chart or compass.

Agriculture, although the first, best, and noblest employment of man, is yet but imperfectly understood. Chemists have done something to promote its objects by informing us of the constituents and food necessary to promote the growth of plants, but have left us nearly in the dark in relation to the best method of supplying or applying the same.—That knowledge, with numerous other objects of inquiry, can be gained by no other means than by practical and experimental farmers, for which we look to your agricultural meetings with much solicitude. If we, as working farmers, can have new and well demonstrated facts, we should draw our own inferences, and if we should err, it would only prompt us to more intense inquiries. The truth that the gases arising from the decomposition and putrefaction of manure is the cause of all vegetation, as demonstrated by Sir Humphry Davey, is truly valuable; at least it has been so to me. It has taught me the effect of manure on vegetation, and—

First, that it need not of necessity come in contact with the earth or roots of the plants.

Second, that the exhalations arising from it and imbibed by the plants is the true cause of their growth.

Third, that the frequent stirring the earth around the plants has the same effect as uncorking a new set of bottles.

Fourth, that manure spread on the surface loses much of its fertilizing properties before the plants come up, or before they are of sufficient growth to imbibe them.

Fifth, burying it deep is similar to keeping the bottles continually sealed.

Sixth, land highly charged with manure, if plowed in the fall, should be plowed so deep as to bury all the manure, that the frosts may seal up the gases and keep them for use the ensuing summer.—These are but few of the inferences from the experiment of Sir H. Davey.

Now it is very desirable that some of your wealthy and intelligent Massachusetts farmers should make some such experiments as the above. They would confer a great favor on the whole farming community. They have means and leisure, and can do it.

I would add, that taking the hint from Sir H. D., I tried the same experiment with plaster of paris in my corn field, with precisely similar results; that is, setting the plaster in dishes under the hills in the field promiscuously, where there had been no other plaster used.

Yours respectfully, H. S. P.
Orfordville, N. H., Feb. 15, 1856.

For the New England Farmer.

PEARLASH.

MESSRS. EDITORS:—Your chemical friend of January 5th does not give the whole process of manufacturing pearlsh, and as I am somewhat familiar with the whole matter, I beg leave to offer the following:—What "Chem." calls pearlsh, is only *scorched salts*, and are of a greyish color. This process of heating them in the oven, only burns out the coarse and lighter impurities, and leaves them in a more condensed and heavier form. Another process is still required, to separate their impurities from the pure salts, or pearlsh of commerce. Chem's. pearlsh, or what I call scorched salts, are

dissolved in water, when the impurities will settle at the bottom, which they would not do in the black salts, because they were too light. I mean the impurities were too light. This liquid is now carefully drained off and evaporated, or boiled to dryness, and is called *white salts*, and is, of course, in a purified state. These salts are again put into the oven, such as Chem. describes, and heated until the oven appears to be full of sparks of liquid fire, such as comes from the blacksmith's forge, just before the iron melts; it is now taken out and cooled off, and is ready for market, and is truly white as snow itself.

M. S. WOODWARD.

Bath, 1856.

ACID IN THE SOIL.

The presence of free uncombined acids in the soil, affords one of the most insuperable barriers to successful and profitable cultivation by which the efforts of the farmer can possibly be opposed. How these acids act, is sufficiently explained by Mr. Ruffin, in his essay on "Calcareous Manures." The presence of acids, he says, "by preventing or retarding putrefaction, keeps the vegetable matter inert, and even hurtful on cultivated lands; and the crops are still further jured by taking up the acids with their nutriment. A sufficient quantity of calcareous earth, that is, earth where lime is present mixed with the soil, will immediately neutralize the acid and destroy its powers; the soil, released from its baneful influences, will be rendered capable, for the first time, of exerting the fertility which it really possesses. Calcareous earth has also the power of altering both the texture and absorbency of soils."

On all lands where there is a growth of red sorrel, acids of some kind abound in a free and uncombined state, and it is only by adopting some emendatory powers of culture, or by the application of neutralizing substances—such as *lime, ashes, &c.*—that they can ever be rendered fertile in the production of valuable crops.

On lands where sorrel seemed determined to overpower every other plant, we have eradicated it effectually, by the use of lime and ashes, but at the same time giving the soil a more generous manuring, and more careful cultivation with the hoe. We have, therefore, no doubt of the correctness of the statement by Mr. Ruffin, who is a very careful and experienced cultivator himself.

It is important that the farmer observe very closely what the *natural* prevailing product of his soil is, as this will indicate more correctly, perhaps, than anything else, what sort of a corrective is required. If sorrel greatly abounds, or wormwood, or the daisy, or bulbous-rooted grasses, state the fact at the farmers' club, and discuss it, drawing out the experience of each, or, if necessary, get an analysis of the plant, and learn what the character of the soil is in which it flourishes so well; then, perhaps the proper correctives may be applied.

APRIL 19, 1775, AND APRIL 19, 1856.

WRITTEN FOR THE ANNUAL FESTIVAL OF THE CONCORD FARMERS' CLUB, APRIL 19, 1856.

Four score years and one have past,
And this the natal day,
Since Concord heard the war-ory blast
For battle's fierce array:

Since o'er these hills, or through the vale
When April's sunshine beamed,
As sire to son has told the tale,
Old England's banner streamed.

It crossed the Atlantic's surging tide
At tyranny's command,
To cast its shadow far and wide
O'er this our native land.

It came with drum, and squeaking fife,
And bristling bayonets bright,—
With men equipped for bloody strife,
Freedom's young bud to blight.

On war-clad steeds, with swords unsheathed,
Their leaders rode in pride;
Nor deemed that here in Concord breathed
Bold hearts to check their stride.

Our fathers left their peaceful toil,
To meet the invading band,
To free their hearths, their homes, their soil,
From tyranny's rude hand.

And bade them hurl that banner down,
Nor plant their standard here;
We serve no king, we own no crown,
Nor earthly monarch fear.

The conflict of that glorious morn
Yon monument shall tell
To generations yet unborn,
Of those who fought—who fell.

That struggle o'er, these fields are ours
To plant, to sow, to till;
They teem with fruit, they're bright with flowers,
And spacious granaries fill.

In valleys low, by hill-side steep,
Or where the plains extend,
Are grazing herds, or bleating sheep,
Or ripening harvests bend.

Ascend yon hill with verdure clad,
Or crowned with towering trees;
Not the blest view that Moses had
Could more delight or please—

When on the mount the patriarch stood,
Led by Jehovah's hand,
He saw beyond old Jordan's flood,
Canaan—promised land.

So from our Pisgah's heights we view,
Where'er the eye may roam,
Bathed in the sunlight or the dew,
The farmer's happy home.

His acres broad around him lay
In furrow or in sward,
His toils are hard from day to day,
But—Plenty's the reward.

With toll-worn hands, by sweat of brow,
The Primeval Fiat said,
"Go till the earth, its surface plow,
By labor earn your bread.

For thy transgression, this the doom,
From Paradise to go,
Where Eden's flowers perennial bloom
And fruits uncultured grow.

Thistles and thorns the earth shall yield,
Dust shall return to dust,

Cursed for thy sin is every field—
But in my promise trust.

Earth shall bring forth her sure increase,
Seed time nor harvest fail,
I've arched in heaven my bow of peace
Where watery vapors sail."

Nor yet alone was Adam doomed
His Paradise to leave;
Where'er he went the flowers still bloomed,
And with him wandered Eve.

Her daughters fair are with us here,
We have them by our side,
Our cares to sooth, life's paths to cheer,
As matron, sister, bride.

Home is not home where they are not,
The garden is a waste,
The hearth a cold, unsocial spot,
Unless by woman graced.

In every varying scene of life,
Where'er our lot be cast,
Woman as mother, sister, wife,
Is earliest and last.

S. M.

Concord, Mass., April 19, 1856.

For the New England Farmer.

THE AMERICAN GOLDFINCH.

There is a peculiar trait in the habits of this bird which I have never seen mentioned by any Naturalist, and am at a loss to conceive why it should have escaped their notice, when such habits digress materially from the general custom of all other birds. I allude to the time of their breeding. It is a fact which I have for many years noticed, that these birds do not commence building their nests until the month of July, while many kinds, who remain with us through the whole season, have reared their first brood, and have commenced laying their eggs for the second. By careful observation and study with regard to this fact, I am led to the conclusion that, although the old birds find a sufficient quantity of food at all seasons of the year, and the kind that is adapted to their wants, they would be unable to find in spring or early summer those new and milky seeds which are the necessary food for their young, for those seeds that have escaped vegetation are exceedingly hard and dry by age, and would be highly injurious to them as food. Had they been constructed with a pouch, as some birds are, into which the hardest grain or seeds may be received, and in a short time softened by the chyle formed in such pouch or stomach, as is the pigeon's, they might commence their breeding earlier in the season, and not delay the time until a certain period arrives.

In the study of nature one is surprised to see the beauty and harmony that exists through all the works of Him who is the contriver of them all.—How wonderful it is that the Goldfinch, by a law of their nature, should not be allowed to bring forth their young before, nor after, but at the very time when those seeds used by them for food have commenced their formation, or have passed into the milk, in which state they are more easily dissolved in their stomach, and at which time an abundant supply may always be found.

They sometimes feed their young on the pulps of barley, oats, and even Indian corn; but their principal and favorite food is the seeds of the autumnal hawk-weed and thistle.

They usually build upon some sapling, preferring the Maple to any other; and although they select so clean a tree, and build so neat a nest, they are exceedingly filthy in and around it, removing none of the excrements of their young from the time they are hatched till they have flown. One would hardly believe, on seeing it, after they are fledged, that this delicate looking bird that daily washes in the cleanest water, that gently runs over the pebbles in some brook, reared their young in such a foul nest. I do not know of any bird that breeds amongst us, so filthy at home, nor of any when abroad who appear so clean, or who seems to take so much real pleasure in washing. This habit of their frequent washing seems not to have been noticed by Mr. Wilson, but Mr. Audubon asserts that "they seldom alight on the ground, unless to procure water, in which they wash with great liveliness and pleasure."

During spring and the first part of summer, they rove about in small flocks, and in July will assemble together in considerable numbers on a particular tree, seemingly for no other purpose than to sing; these concerts are held by them in the forenoon of each day for a week or ten days, after which I have noticed they very soon commence building their nest. I am inclined to believe this is their time of courtship; and that they have a purpose in thus assembling together other than that of singing. If, perchance, one is heard in the air, the males utter their call-note with very great emphasis, particularly if it is a female; and while in her undulating flight she describes a circle preparatory to alighting (as is always the case,) they will stand almost erect, move their heads to the right and left, and burst simultaneously into song. They do not quarrel, as male birds of other species usually do, at such times, nor do any of them manifest in the least degree a preference to either of the females; when they disperse, two or three leave the tree at the same time flying wide apart, or each bird taking a different direction.

The nest of this bird that is now before us, is, as I have already remarked, usually placed on a sapling of the white maple, and built almost entirely of hemp, tow or wool, and lined with the softest material. Its exterior diameter is three inches, its interior diameter is $1\frac{1}{2}$ inches, and its depth is $1\frac{1}{2}$ inches. The female usually lays four and sometimes five eggs of a uniform bluish white; they are eleven-sixteenths of an inch in length, and seven-sixteenths of an inch in diameter, and they raise but one brood in a season.

Some years the Goldfinch is a resident of the State of Massachusetts through all the seasons, and in winter a flock is often seen flitting from one field to another in search of food, of which in some instances they obtain a small allowance, as the deep snows sometimes bury, or the frozen rains encase the stalks of weeds and grasses, which contain the food upon which they live.

Although a small bird, they are remarkably hardy, enduring the rigors of winter, and sporting over the snow as blithe and contented as when they bask in the sun, or bathe or plume their feathers in the month of June, and it really seems rather than otherwise to them a season of pastime; but the cold winds which drive the snow from its northern home, brings with them their most dreaded enemy; he perches upon some post in the fence, or topmost branch of a tree, from which he can detect the least

moving object within scope of his vision, and while the Goldfinches are busy in gleaning for food in a variety of positions, unconscious of an enemy about them, the "Butcher bird" drives in their midst, striking his victim and bearing him off to the nearest tree; at this the whole flock is alarmed and rise in the air, flying in all directions, not knowing which course to take, while in the confusion small detachments are formed from the main flock who remain separate, until in subsequent time, they meet the same or some other party. A. F.

Danversport, 1856.

GOULD'S MURIATE OF LIME.

We have made some experiments with this manure, on wheat, and with fine results. Since that time it has been considerably improved by the addition of liquid night soil—the component parts of this manure are all good. Below we give a letter from a gentleman who has tried it.

MR. JAMES GOULD:—I take the present opportunity to acknowledge the receipt of a barrel of your muriate of lime, about the middle of Aug., through the agency of C. Young & Co., Boston.

Owing to the lateness of the season, and the drought which followed the long rains in July, a fair trial of its merits could hardly be expected. Yet the result of the experiments made with it was highly satisfactory. I had a field of clover, from which I had already taken two crops, that season. Upon four square rods of this field I applied, as a top-dressing, about 40 pounds of muriate of lime. The effect produced, occasioned much surprise, for, where the fertilizer was applied, there the growth of clover was heavy, rank and dark green; exhibiting a striking contrast between that portion which was top-dressed, and the remainder of the field which was not. I thought at the time, that this third crop which was fed off, was equal to the second crop which was cut.

I tried this fertilizer upon different kinds of vegetables, and in one instance, side by side with Mapes' Superphosphate of Lime, upon a few drills of ruta-bagas, I could not perceive any difference in the result, though the yield from these drills so manured was greater than from the rest of the field.

I think that this muriate of lime must be a valuable manure. Convinced by the result of these experiments, I intend to top-dress my grass lands and clover fields with it the next spring.

Yours with respect, W. F. WHEELER.
Grafton, Nov. 22d, 1855.

VINEGAR ANIMAL.—Huc, in his travels in China, gives a curious account of the "Vinegar Animal," a polypus found in the Yellow Sea, which is placed in a large vessel filled with fresh water to which a few glasses of spirits are added; and, after twenty or thirty days, this liquid is transformed into excellent vinegar as clear as spring water, very strong, and of a very agreeable taste. Additions of pure water, without any more spirit, are all that is necessary to insure a perpetual supply. Like other polypi, it propagates from a detached limb. The formic acid of ants, and the exudations of the slimy grub which feeds on our pear leaves, contain vinegar.



RURAL HOMES.

We have taken considerable pains, and incurred some expense, in laying before the reader a variety of styles of dwelling-houses, and the outbuildings which usually surround them. The wide circulation of this journal demands this variety, because it goes into the hands of all classes of our people, each of which may find something in it to meet its general wants. The architectural rules which have from time to time been given, are from the best works on the subject which our country affords; and if they have not always met the exact wishes of the person building, they have, at least, presented a number of views of the case, and enabled him so to mingle them with his own, as to produce something near the desired result.

It is not easy to say what shall be the architectural style of a dwelling—what pitch its roof, how high its posts, what point of the compass its front shall face, or what ornamental work it shall receive, because every locality in the country requires something appropriate to its own position and its general surroundings. A square brick house, in the

country, with contracted gables and eaves, and standing in the midst of a beautiful grove, would strike the most unobserving as sadly out of taste, and a blotch upon the natural objects about it. A correct taste may build in such a spot so that there would be harmony between the buildings, the location and the immediate scenery, upon which the eye would dwell with pleasure, and nothing but agreeable emotions be excited in the mind. This taste we may greatly improve by attention and cultivation. To this end we make these suggestions and present our engraving.

The appearance of the rural homes of New England has greatly changed during the last fifty years,—and changed for the better. We are told that forty or fifty years ago there were two classes of farm houses prevalent, and that he was a bold innovator who broke away from the style which had been adopted and sanctioned by almost universal consent. One of these styles was a large two-story square house, with two front rooms, with a front door between them, but no hall through the house,

a large kitchen back of these rooms, and a bed-room at its end. The chambers were arranged pretty much like the rooms below. One of the front rooms, that on the south corner, the kitchen and the bed-room, were usually finished and plastered, but often without paper or paint. In hundreds of cases, the remaining portions of the house were left untouched either by plane, trowel or paint-brush,—a monument of folly, and a verification of the fact, that the builder did not count the cost before he began. Some of these houses remain to this day, the most dismal and dreary looking habitations we have. The traveller, as he passes, may see through them in every direction; for those who erected such things were quite sure not to build where trees stood, or if any were there, to cut them down.

The other style was the less pretending, cheaper, and yet more comfortable and convenient one-story house, with a sitting-room on one corner, a small bed-room behind it, a good-sized kitchen on the other end of the house with a bed-room, and a small sink-room behind the chimney. In both styles the chimney stood in the centre, occupying a goodly portion of the whole area, and containing bricks enough to build a modern fortification.

At present, we believe both these styles are abandoned as the peculiarities of a by-gone age.—It is found in this, as it is in other things, that a careful study of the matter will enable us to construct a good looking, convenient, and even ornamented dwelling, at as little cost as one of the ghastly, unfinished castles of which we have spoken.—The whole matter of building is now reduced to so much of a certainty, that one may see his home in advance,—first, every stick of timber that is to compose it, and then in perspective. He may have his plans and estimates, and know, to a dollar, what his structure is to cost, as well as the farmer can give the cost of cultivating an acre of corn. And this every person building should do, and will find it an item of economy in the end.

It was our intention to speak more of the *surroundings of the house* than of the house itself,—but that must be left for another time.

HAY COVERS.—*Every Farmer his own Manufacturer.*—Take a piece or more of yard wide unbleached cotton sheeting, that can be bought for 7 to 8 cents per yard, and tack it up on the sunny side of the barn or board fence. Then prepare the following mixture, namely:—For one gallon of linseed oil, add about two pounds of beeswax, to be simmered together, and when taken from the fire, add about a quart of Japan. When it is cold, it should be about the thickness of paint. If too thin, add more wax, and if too thick, add more oil, then paint the cloth over, on one side only, with a common painter's brush, and after drying a day or two, take it down and cut it into squares; then pick up stones of about 6 or 8 ounces each, and get the fe-

males of the family to sew one into each corner, and the thing is completed. It would be an improvement to enclose the stones in a small bag and suspend them a few inches, which would be thought very little more trouble in so good a cause. No hemming the selvages is necessary. Cast-iron weights of 6 ounces each would cost about one cent apiece, but it is doubtful whether they would answer a better purpose than stones. Every farmer should supply himself with these covers *at once*, as by and by he will be too busy to attend to this matter. The immense losses sustained last year, by wet weather, should admonish him of its utmost importance. There is the best authority for stating that the county of Worcester alone, which produces upwards of 145,000 tons of hay annually, would have saved \$20,000 last year if the farmers had been supplied with these hay covers.—*Hampshire Gazette.*

THE FARMER A MAN OF TASTE.

But the farmer of to-day should be *not only* a thoroughly educated man, and possessed of sound accomplishments; he should be pre-eminently a man of fine taste. He is an in-dweller of Nature's Temple, and is every where surrounded by the beautiful creations of Art Supreme. Here he may take lessons from the choicest pencillings of a perfect Master. In matters of taste, order and neatness, the American farmer need be second to none; and these qualifications should be manifested in all his operations.

When I see a farm laid out without regard to order or system, the fields taking shape as the convenience of the moment might dictate, I conclude that the owner has never studied taste or economy. When I see the fences of a farm overgrown with bushes, briars, weeds, etc., it is quite clear to me that the man who "*stays*" there has very little taste, so far as his business is concerned.

When in passing the domain of a large farmer, I find his spacious dwelling and his extensive barns and stables, side by side—door-yard and barn-yard in close juxtaposition—the latter odoriferous of its fertilizing contents—I at once see that with all his acquisitions, the proprietor has neglected to store his mind with a little *humanizing taste*—a few ideas and principles of order and propriety—which would have put his barns and stables, with all their unpleasant accompaniments, back, in rear of the dwelling, where they belong, giving the latter prominence and character, showing that the farmer and his household believe themselves superior to the beasts of the stall, and are unwilling to live virtually in their midst.

When I see a door-yard overgrown with wild grass and weeds, the fence shabby, no flowers or trees about, I know at once that there is no taste there, in doors or out.—*Betts' Agricultural Address.*

CORN STARCH.—Another large manufactory of starch from Indian corn, is about to be established in the Scotia Valley. A company at Columbus, Ohio, it is reported, are about to put up buildings and machinery sufficient to work up six hundred bushels of corn a day. Such use of corn will do less mischief in the world than some other modes of using it, largely practiced in Ohio.

CLEAN YOUR CELLARS.

By a beneficial arrangement of Providence, gases and odors most prejudicial to human life are lighter than the air which surrounds us, and as soon as disengaged, rise immediately to the upper atmosphere, to be purified, and then returned to be used again.

The warmer the weather, the more rapidly are these gases generated, and the more rapidly do they rise, hence it is, that in the most miasmatic regions of the tropics, the traveller can with safety pursue his journey at mid-day, but to do so in the cool of the evening, or morning, or midnight, would be certain death.

Hence also the popular but too sweeping dread of "night air." To apply this scientific truth to practical life in reference to the cellars under our dwellings, is the object of this article.

In the first place, no dwelling-house ought to have a cellar. But in large cities, the value of the land makes them a seeming necessity, but it is only seeming, for during many years residence in New Orleans, we do not remember to have seen half-a-dozen cellars. But if we must have them, let science construct them in such a manner, and common sense use them in such a way as to obviate the injuries which would otherwise result from them.

The ceilings of cellars should be well plastered, in order most effectually to prevent the ascent of dampness and noisome odors through the joints of the flooring.

The bottom of the cellar should be well paved with stone; cobble stones are perhaps best; over this should be poured, to the extent of several inches in thickness, water lime cement, or such other material as is known to acquire in time almost the hardness of stone; this keeps the dampness of the earth below.

If additional dryness is desired for special purposes, in parts of the cellar, let common scantling be laid down, at convenient distances, and loose boards be laid across them for convenience of removal and sweeping under, when cleaning time of the year comes.

The walls should be plastered, in order to prevent the dust from settling on the innumerable projections of a common stone wall.

Shelves should be arranged in the centre of the cellar, not in the corners, or against the walls; these shelves should hang from the ceiling, by wooden arms, attached firmly before plastering, thus you make all free from rats.

To those who are so fortunate as to own the houses in which they live, we recommend the month of June as the most appropriate time for the following recommendations.

Let everything not absolutely nailed fast, be removed into the yard, and exposed to the sun, and if you please, remain for a week or two, so as to afford opportunity for a thorough drying.

Let the walls and floors be swept thoroughly, on four or five different days, and let a coat of good whitewashing be laid on.

These things should be done once a year, and one day in the week at least, except in mid winter, every opening in the cellar, for several hours, about noon, should be thrown wide, so as to allow as complete ventilation as possible. Scientific men have forced on the common mind, by slow degrees, the importance of a daily ventilation of our sleeping-

apartments, so that now none but the careless or the most obtuse neglect it; but few think of ventilating their cellars, although it is apparent the noisome dampness is constantly rising upwards and pervading the whole dwelling.

Emanations from cellars do not kill in a night, if they did, universal attention would be forced to their proper management, but it is certain, from the very nature of things, that unclean, damp, and mouldy cellars, with their sepulchral fumes, do undermine the health of multitudes of families, and send many of their members to an untimely grave; especially must it be so in New York, where the houses are generally constructed in such a manner, that the ordinary access to the cellar, for coal, wood vegetables, etc., is within the building, and every time the cellar door is opened, the draught from the grating in the street drives the accumulation of the preceding hours directly upwards into the halls and rooms of the dwelling, there to be breathed over and over again, by every member of the household, thus poisoning the very springs of life, and polluting the whole blood.

With these views we earnestly advise our city readers, as a life-saving thought, in the selection of a dwelling for the ensuing year, to give ten per cent. more for a home which has a model cellar; you will more than save it in doctor's bills, in all probability, to say nothing of taking pills, and drops, and bitters, and gin, from one month's end to another.—*Hall's Journal of Health.*

THE POWER OF IMAGINATION.

That mysterious influence exercised by the mind over the body, is well illustrated in the following case, contained in Dr. Warren's excellent treatise on the "Preservation of Health."

"Sometime since a female presented herself to me, with a tumor, or swelling of the sub-maxillary gland of the neck. It was about the size of an egg, had lasted two years, and was so very hard that I considered any effort to dissipate it by medicine to be vain, and advised its removal by an operation.

"To this, the patient could not bring her mind; therefore, to satisfy her wish, some applications of considerable activity were directed to be made to the part, and these she pursued a number of weeks without any change. After this she called on me, and with some hesitation, begged to know whether an application recommended to her would, in my opinion, be safe. This consisted in applying the hand of a dead man three times to the diseased part. One of her neighbors now lay dead, and she had an opportunity of trying the experiment, if not thought dangerous. At first I was disposed to divert her from it, but recollecting the power of the imagination, gravely assured her that she might make the trial, without apprehension of serious consequences. Awhile after she presented herself once more, and, with a smiling countenance, informed me she had used this remedy, and no other; and on examining for the tumor, it had disappeared."

ANTIQUITY OF COW TALK.—"Koh! koh! koh!" ejaculates the milkmaid when she calls her cow. It is somewhat remarkable that the Persians, more than two thousand years ago, used the very same word for the same purpose—to call their "moolies."

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 12.

WESTERN COUNTIES.

SOMERSET, GLOUCESTER, MONMOUTH, HEREFORD, SHROPSHIRE AND CHESTER.

If the southern region is the zone of the cereals, and the eastern counties the chief domain of the four-course system, the character of the western counties is grass, that primitive wealth of England. The rural prosperity of these counties is of old standing. At one time, the entire agricultural wealth of England was confined to grass, in the western districts and part of the central, and to the wheat lands of the south-eastern counties; the rest of the island was nothing but heaths, marshes and mountains. Later, however, these wheat lands have been surpassed by the light lands, worked by the four-course rotation; but the grass lands have maintained their old superiority. The rain, which falls in the west of England, is three times more than in the east; and, perhaps, the grass lands of western England are nourished by the saline particles, which the sea breezes bring, as well as by abundant rains.

Now-a-days, 'his grass country, though enriched by manure, which successive generations of cattle have deposited upon it, begins to lag behind. Agriculturists, of the present day, are not very favorable to what is called old grass. But no change has yet taken place, in the management of the grass lands of the western counties; the farmers of the present day, do just as their fathers did before them; and probably one-fourth of the United Kingdom is now in old grass. Nowhere else is found a like extent of land, giving such a revenue. The rents or profits of these, is half and more of their gross product. The labor bestowed upon them is scarcely anything, the capital required is small, the chances of loss small also; the whole is nearly sure profit. Thus we see rents given of as much as forty dollars the acre.

Grass lands may be turned to account in three ways; for breeding stock, fattening, and the production of milk. Breeding is the least profitable of the three. To this, only the forest pastures are devoted. Fattening is looked upon as more lucrative and certain, where the pastures are of a better kind. But it is milk, which carries the day in England, and the cheese of these counties is highly esteemed.

For a few large estates to be met with in the western counties, there are a great many small ones, some of which are worked by their own proprietors. Indeed, in grass land districts, the nature of the prevailing occupation forbids its being carried on, on a large scale.

The western counties are Somerset, Gloucestershire, Monmouth, Hereford, Shropshire and Chester.

That portion of Somerset which borders on Devonshire, is mountainous and rugged, and contains one of the most desolate and uncultivated regions in the island—the granite moorland, called Exmoor Forest, rivaling Dartmoor in wildness. It is abandoned to a kind of half-wild sheep, and forms a refuge for the shyest kind of game, such as deer. As a set off to this, the vale of Taunton, bordering on Exmoor, is celebrated for its beauty

and fertility, and all the country abounds in excellent pastures. Rents are very high, averaging \$7 50 the acre, and rising to \$15, and even \$22 50 in the vale.

A county uniting so many advantages, so near to London, and with such outlets as Bath and Bristol for its produce, favored with that beautiful grass vegetation, and with such high rents, might be supposed to be in a very flourishing condition. The working classes suffer, however, and the manifest cause is over-population. This provokes undue competition for farms, and high rents, and too great division of lands. The population of the county has risen from 280,000 in 1801, to 444,000, while the land has not proportionably increased in richness. The only remedy for this untoward state of things, is either an increased production of land or a diminution of population.

Gloucestershire, which adjoins Somerset, divides itself into two parts, which are called the Cotswolds, or high grounds, and the vale or valleys of the Severn and Avon. These two agricultural districts require to be considered separately.

The Cotswolds form a series of table lands from 500 to 600 feet above the level of the sea, intersected by shallow valleys. The character of the soil is poor, and the climate cold. At one time they were almost entirely devoted to sheep pastures, but now, by means of the Norfolk rotation, and the purchase of extra manure, remarkable results have been obtained. The average rent now reaches \$4 00 the acre. The farms are extensive, and farmers generally, well off. The cultivation begins with turnips, which are eaten off by sheep; then comes barley with grass seeds; the third year, clover; the fourth, wheat. The chief stock is sheep, which is the old breed of the country, by modern improvement made one of the best in England—rivaling the Dishley and Southdowns. The agriculture of the Cotswolds may be held up as a model for light and poor soils.

The vale of Gloucester has been endowed by nature more highly than the Cotswolds; but human industry has done less for it. The average rents reach \$7 00. The land is almost entirely under grass, and it holds its ancient and deserved reputation for cheeses. Draining is not much resorted to, and the use of supplementary manures is not common. The small farmers are poor, and the proprietors not rich. No actual distress meets the eye. It seems as if comfort and happiness would never fail, in the charming and refreshing valleys of the Severn and the Avon, with their ever-green verdure, their luxuriant hedgerows, and thousands of grazing cattle; but the prosperity of the farmer does not correspond with the beauty of the vale.

The small county of Monmouth, situate between the sea and the mountains, presents a great variety of aspects; towards the west and north, we have the rugged wildness of the Alps; while the east and south, bordering on the Wye, is a perfect garden. Cultivation by oxen is still sometimes to be seen there; but this is becoming more rare in England, every day. On the coast, rents rise very high, but fall as they near the mountains.

Herefordshire and Shropshire call for but little remark. They are generally hilly, and in the latter are numerous potteries and iron mines. The chief agricultural occupation is the breeding of that fine race of white faced red cattle, known by the name of Hereford. These cattle, which the graziers of

the midland counties purchase for fattening, fatten more readily than any other breed, when put upon good pasture; and their beef is better than the Durham, but slower in forming.

Last, comes the county of Chester, the richest of the six western counties. The fame of the Cheshire cheese has reached thousands who have never tasted it. Half the county, which contains 700,000 acres, is under grass. The number of milch cows it maintains is above one hundred thousand, and each gives from 200 to 400 pounds of cheese, and 15 to 20 pounds of butter. Farming is much divided, and rents for grass lands are about \$7 50 the acre.

The agricultural condition of the county is better and more prosperous than that of Gloucester and Somerset, owing probably to the neighborhood of the manufacturing districts, which offer immense outlets for its produce. Drainage is general, and the use of supplementary manures frequent.

The ancient and prosperous rural economy of this county has not prevented the spirit of innovation. Mr. Littledale's farm, on the Mersey, opposite Liverpool, is already famous. The cows on this farm are stabled throughout the year, which appears monstrous to the graziers of the neighborhood. In summer, they are fed on clover, Italian rye grass and green vetches; in winter, on corn, chopped hay, turnips and beet roots. It is asserted, that, by this means, eighty-three milch cows and fifteen working horses are kept upon eighty acres.

The Marquis of Westminster, a very extensive proprietor, and whose magnificent residence is the ornament of the county, is a great encourager of draining; he has tile works, which make a million of drain tiles in a year, and these he gives gratuitously to his farmers.

The Cheshire cheeses weigh from fifty to a hundred pounds each; the largest are considered the best; some smaller are made in the shape of pine-apples, but they are not so much appreciated. It takes four quarts of milk to produce one pound of cheese. The red color which distinguishes the Cheshire cheese is produced by *annatto*, and they are sometimes kept as much as three years, before they are sold for consumption. The cooler for the milk, the salting tub, the large and powerful presses, the well-kept utensils of wood and iron, the store filled with these huge cheeses—everything in these dairies wears an air of comfort. Among the productions of rural economy, cheese is the most interesting; it furnishes the mass of the population, in all countries, with a wholesome, palatable, and nourishing food; easily carried, and easily procured, cut in any quantity that may be needed, and requiring no preparation. It was the manufacture of cheese which enabled Holland and Switzerland, two of the noblest nations of modern Europe, to establish their independence; as it was the development of her cotton manufactures which carried England through the wars of the French revolution. There is more connexion than is usually supposed, between a nation's political history and its rural economy. The making of cheese passed from Holland into England, along with turnip cultivation; both were valuable gifts, perhaps the turnip the most so even.

The trade in cheese appears likely to be greatly extended, in the present day. The rise in price shows the increased demand. Nothing, however,

is more simple than to imitate the most esteemed qualities of Dutch, Swiss and English cheese; it only requires a little attention, and a certain amount of capital.

M.

THE COUNTRY CHILD.

Child of the country! on the lawn
I see thee like the bounding fawn,
Blithe as the bird which tries its wing
The first time on the wings of Spring;
Bright as the sun when from the cloud
He comes as cocks are crowing loud;
Now running, shouting, 'mid sunbeams,
Now groping trouts in lucid streams,
Now spinning like a mill-wheel round,
Now hunting Echo's empty sound,
Now climbing up some old tall tree—
For climbing's sake—'tis sweet to thee
To sit where birds can sit alone,
Or share with thee thy venturesome throne.

CUNNINGHAM.

MILLET AS FODDER.

To secure a *variety* of fodder ought to be an object of the farmer, as well as to secure a large amount. Cattle will often eat a foddering of poor meadow hay with as much relish as they will the best timothy or clover; and this is evidence sufficient of the *necessity of variety*. But if, when we furnish variety, we can supply grasses of a nutritive character, that will at once gratify the appetite and contribute to the muscular system, then we introduce a fitness of things which will result in profit.

It seems now to be so much of a settled opinion among farmers, that we shall continue to have dry hot summers and short pasture feed, that all resort to some green fodder to make up the deficiency—and this resort has been principally to green Indian corn. Few have tried millet; but those who have, like it, and find it a profitable crop. Cut green and fed to stock, it is one of the best soiling crops we have—and made into hay, cattle eat it with as much avidity as they will our best grasses.

The mode of culture is simple and easy. The ground should be rich, or at least in good condition, finely pulverized, and sowed with seed about the first of June, using *eight quarts to the acre*; we have never used more than this amount, and found it amply sufficient. When sowed as late as the tenth of June, it is not necessary to cut it until after the rye and wheat crops are harvested, and the press of work is over. It is somewhat difficult to cure it, as it is a heavy, succulent plant. Cut it when the blossoms are just closing, and make it as clover hay is usually made. Hay caps may be used to great advantage in securing this crop, as it is necessary that it should be out two or three nights. A few square rods left to ripen will furnish an abundance of seed for another year.

☞ The post-office address of our friend N. P. MORRISON, "The Apple Man," is North Cambridge, Mass.

For the New England Farmer.

COLTS.

FRIEND BROWN:—My regard for that noble animal, the horse, leads me to fully endorse the good practical hints of your correspondent, "M. H. C.," upon raising colts. But an important item has escaped his notice, namely,—cleanliness, as regards the pen, which has much to do with their feet, and consequently, their usefulness in after life.

The feet of a colt are supposed to be tender, spongy and susceptible, as compared with an old horse; now, suppose the colt-pen to be a winter's accumulation of filthy droppings, and never to be cleaned out till planting time—with an occasional littering of straw for decency's sake. Very soon, fermentation, heat, and almost fire, is generated in this hot-bed, so ignorantly, yet so kindly prepared for the colt. His feet, or body are in constant contact. If he lies down, he burns; if he stands, his feet are absorbing powerful ammoniacal gases—disease is taking hold; the young hoof begins to grow dry, hard and horny,—ring-bones begin to clasp the ankles—the joints stiffen, and by the time the foot is ready for the shoe, he is oftentimes crippled and of little value. The pungency of these gases, must be hurtful to the lungs as well as the feet. When children are born with corns on their toes, we shall believe colts are born with diseased feet—not till then. While a calf at five weeks old is worth but ten dollars, the promising colt may be valued at one hundred dollars—take good care of that colt.

Mr. Editor, I write from experience upon this matter, as many of your readers know. I spoiled two horses, and nearly the third one, by allowing them to stand, month after month, upon their own filth, well littered down to keep them clean. My motives were kind, but my practice was treacherously wrong; "Old Fanny" was rapidly crippling upon her hot bedding of manure, but was saved in time, by substituting a hard plank floor. A French writer put me right; he said, half the horses, old and young, are ruined by this practice. A moment's reflection convinces one. Now give the colt a hard clean floor, (and the old horses too.)—It expands the hoof, hardens and prepares it for after service. It would be about as convenient to get the butter out of a dog's throat, as to make some farmers believe this *hard floor doctrine*—yet it is indisputably true.

H. POOR.

Brooklyn, L. I., April, 1856.

P. S. I take strong ground against Solomon Steele, Esq., of Derby Line, in his treatment of colts. He says, "I never allow a colt to stand upon a hard floor before he is two years old, as I believe the practice to be prejudicial to the formation of good feet." In the foregoing communication—written two weeks since—I had anticipated Mr. S. on this very point. But with all due deference, if his plan is to keep the colt bedded down, standing upon his droppings, I should expect a contracted instead of an expanded hoof, superinduced by standing upon heated offal, the young feet absorbing, drying, being naturally feverish. If the young colt never cingles when he gallops over the frozen ground, why keep his feet submerged and softened by his filth at the risk of inoculating him with disease?—Will not a hard floor better prepare and spread the young foot for hard roads and paving stones, than standing upon a soft substance? If an old horse

can be crippled in one winter, how long would it take to ruin a colt under the same circumstances?

In conversation some years since with Mr. H., of Belfast, Maine, I named the circumstance of nearly ruining my third horse with this mistaken kindness. He instantly replied, "I always buy the best horses to be found, but they become diseased in the feet, soon after I get them; I keep them standing upon their manure, well bedded down, and now I am convinced of my error."

This is a subject of vast importance, and I hope it will be thoroughly discussed, by persons of experience and scientific attainments, as it regards the pathology and diseases of the horse. If it is malpractice that has made so many tender-footed horses, let us look to it.

REARING CALVES.

BY F. HOLBROOK.

Take the calf from its dam when a few days or a week old, according to the condition of the cow's bag, and learn it to drink new milk, warm from the cow, feeding it thus twice a day till four or six weeks old. Then begin quite gradually to lessen the quantity of new milk, adding, in place of that taken away, an equal measure of skimmed milk—the milk, previous to skimming, having stood about twelve hours, and, before it is given to the calf, having been warmed to the temperature of the new milk. So graduate the reduction of the new and the addition of the skimmed milk, that the latter shall constitute the entire mess for the calf when it arrives at the age of eight or nine weeks. When the calf is five or six weeks old, give it a few dry oats, say a moderate handful daily, and increase a little at a time, till at and after ten weeks of age the calf shall receive about a pint per day; also, at the age of five weeks, begin to feed a little nice fine hay. When the calf is ten weeks old, the milk it receives may be that which has stood longer than twelve hours before being skimmed; also at and after this age, the quantity of milk may be gradually lessened, and water substituted for the milk taken away, so that when the calf is twelve or fourteen weeks old, the milk shall be wholly withdrawn, and the calf shall receive oats, hay and water, or shall be turned off to good pasturage.

Thus managed, the calf will never know when it was weaned from milk—will have no season of rearing and falling away in flesh, or remaining stationary in growth—will have no troublesome habit, after the time for weaning, of sucking cows that may chance to be in the pasture or yard with it, and will be quite as large, plump and symmetrical when a yearling, as though it had been reared by the more expensive mode of sucking a cow. During the winter preceding the period when the calf becomes a yearling, it should be fed on the best of fine hay, with one quart of dry oats, or six to eight quarts of mashed roots, daily. It is not a good practice to feed meal to young calves, either before or after weaning, the meal being too heating, injuring digestion and bringing on purging, and worse still, if fed freely, causing the calf to grow out of shape, picked and scrawny. It is also difficult to rear a nice well-shaped calf on gruel, because of the meal of which the gruel is in part made, and because the quality for forming well-developed bone and a well-shaped body, which milk eminently possesses, is too much lacking in the gruel.

EXTRACTS AND REPLIES.

THE CABBAGE CROP.

As I am about commencing the cultivation of cabbage I wish you to inform me which are the best varieties, both early and late, and what kind of manure is best for them, and how near the hills ought to be to have them do well. ALDEN HILL.

Hudson, N. H., May 6, 1856.

REMARKS.—The early York is generally considered the best for the first crop, and the large late Drumhead, for winter use. Good barn-yard manure is better than any thing else, as a fertilizer, but if you want a specific take superphosphate of lime, and apply in the hill. Eighteen to twenty-four inches apart, according to size of cabbage.

BROWN CORN—CALVES—SHEEP.

MR. BROWN:—I saw a notice in the last *Farmer*, April 5, of King Philip's corn, or brown corn. Can you tell me its origin? Did it come from one of the islands of the Winnepisiogee lake, N. H.? If not, and is as good as recommended by those gentlemen, every farmer should plant it. Where can it be procured, and at what price?

CALVES.

I saw in the *Farmer* about a year since a notice, or an article, on raising calves without suckling them on the mother. I have been trying to look it up, but have not succeeded; will you please republish it, as you can probably refer to it in your *Monthly Farmer*, or perhaps you or some of your numerous correspondents will give us the "modus operandi," afresh.

SHEEP.

I notice that some of your correspondents recommend very highly the South Down sheep. Having sold my flock, I should like to obtain a few to commence with, of a kind that are peaceable, and will go in a pasture of about twenty acres. Are the South Downs peaceable? Where can they be obtained, and at what price? If some of the numerous readers of your excellent paper have this kind of sheep living near this section, should like to hear from them.

Will Mr. R. C. Fay, of Lynn, give, through the *Farmer*, his method of training sheep so that they will not jump low walls when there is better feed the other side? W. B. WEEKS.

Gilford, April 11, 1856.

REMARKS.—The corn you speak of is the Brown Corn of Winnepisiogee Lake. At the seed stores.

The article on rearing calves, was written by Mr. HOLBROOK, our Associate, and we give it in another column.

HOW SHALL I LAY BARN FLOORS?

MR. EDITOR:—I wish to know which is the best way to have a barn floor laid so as to have it cheap and tight? I mean the thrashing floor. Some lay two thicknesses, and some lay groove and tongue plank. I have seen plank laid down having the upper edges beveled so as to have the lower edges tight, thus allowing the dust and hay seed to fill the crack, making it tight. I should think that when thrashing the dirt would pass out. C.

CORN FOR FODDER.

MR. EDITOR:—I would ask how corn stalks can best be raised for green fodder, whether in drills, or sowing the seed broadcast? If in drills, what should be the distance apart? What kind of seed is best, the southern or our northern corn?

Would it not be best for late fodder planted in June? A. D. M.

Hyannis, Cape Cod, 1856.

REMARKS.—Sow southern corn, white or yellow, in drills $3\frac{1}{2}$ feet apart. Begin immediately to sow a few drills, and sow occasionally till June.

GREEN CORN FODDER.

MR. EDITOR:—Please inform me of the best method of curing green corn when planted for fodder for winter use, and also of rearing young turkeys. IRA P. SMITH.

Dublin, N. H., 1856.

REMARKS.—Cut the corn and let it lie one or two days, then tie it up in *very small* bundles and straddle it on the walls, or set common fence posts, insert poles, and put the corn on them, or on anything that will keep the bundle from the ground. Millet is a better fodder crop than corn.

Manage young turkeys much as chickens are. The important rule to be observed is—*keep them from getting wet until they are at least four weeks old*. Wet and cold are the great destroyers of young poultry.

MURIATE OF LIME ON WHEAT.

MR. EDITOR:—I would inquire through you or your excellent paper, if any of your correspondents have ever tried muriate of lime on wheat, if it has any fertilizing powers, and if it strengthens the straw like common lime, and how much per acre.

Dresden, Me., 1856.

SUBSCRIBER.

REMARKS.—We have used it on wheat with excellent results. From five to twenty barrels.

SUMMER WHEAT.

In 1855, I sowed a bushel of wheat the 26th of May, on one acre of ground that had been planted the year previous to corn, and harvested in the month of September, cleared and measured, 30 bushels. I had no more ground prepared for wheat, so I tried an experiment. I plowed one acre of grass land, with a side hill plow, spread on ten loads of green manure, harrowed thoroughly the same day it was plowed, and sowed one bushel of wheat. I harvested 18 bushels of good clean wheat. The ground was plowed and the grain sowed after the 26th of May. LEWIS HALL.

Dover, N. H., April 16, 1856.

TO DESTROY CATERPILLARS.

"C." recommends blowing off caterpillar nests with gunpowder—this has been practiced, but with great care, it has been found that the limbs are often injured.

To G. H. H., Beckett, Mass.—The Eagle Hay Cutter is as good as any in use.

POISON DOG-WOOD—RED ANT.

MR. EDITOR:—Do you know of any means to destroy *poison dog-wood*? We have tried everything we have heard of, and to no purpose.

Is there anything which will drive away the *red emmet*? A. A. E. MORSE.

Methuen, 1856.

REMARKS.—Can shed no light on the dog-wood, other than the common remedies of salt, fire, &c. To destroy the ants, dissolve a little brown sugar in a bowl, squeeze out a sponge in it, and lay the sponge on the shelf where the ants "most do congregate," and when there are a million collected in it, throw it into hot water, then the sugar water, and place upon the shelf again.

MICE AND FRUIT TREES.

MR. NOURSE:—I have noticed several instances of the depredations of mice upon fruit trees in different localities. Having had experience in this way several years ago, I will state how I treated my trees, and saved them, although they were fairly girdled all around. It may not be known to all, if any. I hoed the dirt up around the tree, above the part girdled, and then laid over it a quantity of green turf to keep it in place. The result was, that new roots sprung out from the wounded trunk, quite around it, and the tree recovered, and grew well. In a dry soil, a little plaster mixed with the dirt hoed up, would doubtless be of use in retaining the moisture.

CHANDLER DEAN.

Bridgewater, April 21st, 1856.

WIRE FENCE—GRAFTING THE GRAPE.

IRA BROWN, *New Haven, Ct.*—Mr. NESMITH, of Lowell, was the original manufacturer of wire fence, and, we think, had a branch in New York. We have made inquiry of persons who have long practiced grafting the grape, and they state that the process is in no way dissimilar to that of grafting the apple, and that they are usually successful.

HOW TO CURE THE HEAVES.

I wish to inquire through the columns of your paper if you know of any thing that will cure the heaves in a horse? W. S. W.

REMARKS.—Treat your horse well, in every way, neither working him too hard, nor subjecting him to sudden changes of temperature; then feed him morning and night on good clean timothy or red-top hay, cut, and wet with meal, and at noon four or five quarts of carrots, cut.

WHAT SHALL I DO WITH OLD BONES?

MR. EDITOR:—How shall I dispose of a lot of old bones so as to make them useful? T. J. B.

REMARKS.—If it is not convenient to dilute them with sulphuric acid, boil them in ley made of ashes until they can be pounded fine, or what is better, become of a pasty consistency.

CULTURE OF PITCH PINES.

To JAMES J. SAWYER, *Putnam, Ct.*—Pitch pine seed may be obtained by *Nourse, Mason & Co.*, Boston, at \$3.00 a pound. It would probably take two pounds to sow an acre. Plow shallow furrows, say four or five inches deep, and four feet apart, and make the hills the same distance, and plant much as you would corn, with three, four or five seeds in a hill. Cultivate and keep weeds down.

BEANS ON RYE LAND.

MR. EDITOR:—Will beans grow on new land that had rye on it last year? The soil is of a sandy loam. An answer to be depended on would be gladly received by me, and perhaps be a benefit to others. G. A. RAYMOND.

Royalston, 1856.

REMARKS.—We are a "practical farmer," friend Raymond, laboring daily, both with head and hands, in the fields. We have felled the forest and burnt it; got in the rye, and had fine crops; but we never followed that crop with beans. But if you manure and tend well, keeping off all sheep and woodchucks from the beans, we can see no possible reason why your labor should not be abundantly blessed with an ample crop, if the season should be favorable.

TO PREVENT LAMBS FROM BEING POISONED.

I have practiced for several years with feeding my lambs a little laurel before they leave the barn in the spring, and have never known them to taste it afterwards.

I would like to inquire if Whipple's scythes are made now the same as in use eight or ten years ago.

East Charlemont, April 24, 1856.

REMARKS.—Whipple's scythes are not manufactured now.

HEN MANURE.

I have quite a quantity of fowl manure which I am desirous of using in the most profitable way for vines. How shall I use it? T. R.

Westminster West, Vt.

REMARKS.—Pulverize and scatter it over the hills, and work it in well with the rake. It will make you glad, and the vines too, as far as they know how to be.

HEN MANURE.

MR. EDITOR:—How do you think is the best way of applying hen manure to corn and garden vegetables? This manure has been kept dry during the winter, and can be very easily pulverized.

REMARKS.—Apply it to the hill, well mixed with the earth.

SUBSCRIBER, *South Hanson, Ms.*—Mix superphosphate of lime with your meadow muck for your crop of French turnips, and at the rate of 400 pounds an acre.

For the New England Farmer.

A NEW SQUASH FOR WINTER AND SPRING USE.

MR. EDITOR:—I would recommend to Mr. E. G. Crowell, (and have sent him seed) the Hubbard squash, as the best variety for the table with which I am acquainted; best for quality, and best for keeping—always excepting the crookneck for a *keeper*. This squash is a hard shelled variety, the shell of pure specimens being nearly one-eighth of an inch in thickness. In size it is about one-third heavier than the pure marrow, weighing about nine lbs. when fully grown. Its color is greenish black, and when grown under very favorable circumstances, lead color. It is fine grained, of excellent flavor, very sweet and very "mealy." The only objections I have ever heard made against it, were on the part of some that it was too sweet, and by others, that it was too dry. A first-rate specimen tastes much like a boiled chestnut, and will make a very fair pie without sweetening. They are dryest late in the fall, and sweetest towards spring.

Respecting their keeping qualities, I have kept specimens in a cool dry place, till May. The last sound specimen of last season's crop, I brought to the table towards the close of April. In hardness and productiveness they rank about with the marrow. I have never found it necessary, during the years we have raised them, to take extra precautions, beyond what are necessary for the perfection of ordinary squashes, giving them a *warm rich* soil. A farmer, who for the two past years has raised this variety for the market, informs me that he has sold it at double the price per lb. of the pure marrow, to customers who have once tested its quality.

Of its history, I know next to nothing, farther than that the seed was given to me by an aged female, about twelve years since, in remembrance of whom I named it, and that the party from whom she received it cannot tell from whence the seed came. I infer that it is of foreign origin, partly from the fact that the gentleman to whom I traced it is a resident of a sea-port town, and is largely connected with those who follow the seas.

As Mr. Crowell is total stranger to me, we may consider him an impartial judge; if, therefore, this variety of squash, when planted in warm rich land, is not up to the character I have here given, taking pure specimens as samples, and dating his test from about the middle of November, I hope he will qualify these statements in as public a manner as I now make them.

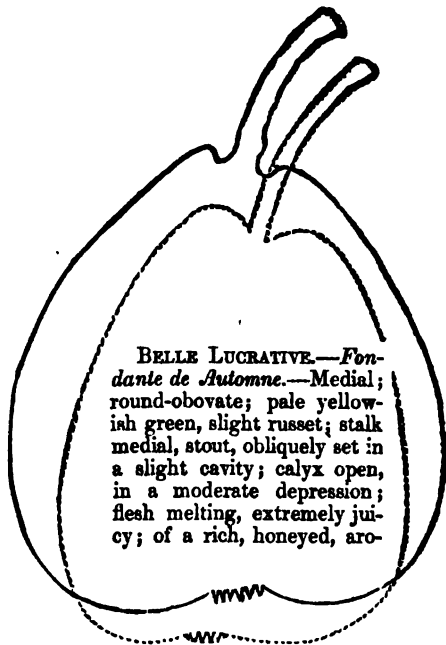
I have made an article more lengthy than I at first intended, but I consider a squash of superior quality and keeping as a rare and excellent table delicacy, and therefore, well worthy of having its good qualities set forth, to induce a more general cultivation.

J. J. H. G.

IMPLEMENTS SOLD IN BOSTON.—The report of the Boston Board of Trade gives the following statistics: Ten years ago, the total value of Agricultural Tools produced in Massachusetts was only \$650,723. Now there are in Boston alone five agricultural warehouses whose united sales in 1855 were two and a half million dollars. Among the articles sold, the curious reader will notice 36,950 plows, 93,000 shovels, 60,600 hoes, 60,000 forks,

138,600 rakes, 33,800 scythes, 12,000 axes, 6,750 wheelbarrows, 11,900 hay-cutters, 12,165 corn-shellers, 5,815 cultivators, 5,100 grain-cradles, 1,856 horse-rakes, &c., &c. One house alone sold 100 tons of clover seed, 10,000 bushels of Timothy seed, and 7,500 bushels of red-top.

BELLE LUCRATIVE AND WASHINGTON PEARS.



BELLE LUCRATIVE.—*Fondante de Automne*.—Medial; round-ovate; pale yellowish green, slight russet; stalk medial, stout, obliquely set in a slight cavity; calyx open, in a moderate depression; flesh melting, extremely juicy; of a rich, honeyed, aromatic

flavor. Latter part of September. In a warm soil and favorable season, it has no superior, but it varies. Hardy, and good bearer. Does not blight nor crack. Poorer in moist soil. Not well tested in orchard culture. Foreign.

WASHINGTON.—*Dotted Outline*.—Small medial; oval-ovate; bright yellow, ruddy cheek, and red spots; stem medial, slender, slight cavity; shallow basin; flesh white, fine, melting, sweet, delicious and perfumed; uniformly good. September 10 to October. Rather small for market. Fine for the amateur, particularly further south. Small grower, good bearer. Beautiful fruit. Origin, Gen. Robertson's estate, Del.—*Cole's Fruit Book*.

ONE ACRE TO SUPPORT A COW THROUGH THE YEAR!—In an article on the "Rural Economy of the British Isles," in another column, it is stated that on the farm of Mr. Littledale, on the river Mersey, opposite Liverpool, *eighty-three* milch cows and *fifteen* working horses are kept through the year on the product of eighty acres! This should be an example to American farmers. We believe that a cow may, and should be, well supported through the entire year, on the product of a single acre. Indeed, we have a few among us who already accomplish it. When this result is more generally attained, we shall hear less complaint of lim-

ted crops and small profits. The energies of the farm must first be concentrated upon a smaller space, and then the power increased of gradually raising the fertility of the whole.

For the New England Farmer.

SUCKER PLUM TREES.

MR. FARMER:—The following article was written a year since, in reply to an article by C. Smith, and accidentally mislaid. If you think it may be useful to plum-growers, print it; if not, use it for lighting your cigars.
Burlington, Vt., May, 1886.

C. GOODRICH.

In your paper of April 21, is an article from C. Smith, Shelburn, Mass., in which he says he finds "that suckers from the plum tree, transplanted as standing, almost invariably fail to produce fruit."

This may be true with those planted by Mr. Smith, and many others; but the theory I think entirely wrong. All suckers or layers from any fruit tree, whether apple, pear, plum or grape, are fruitful or barren, like the parent stock. If a tree or vine is a poor bearer, or produces flowers without fruit, all suckers or layers from it do the same; if a great bearer, the same quality by suckers or layers is propagated indefinitely.

More than three-fourths of the plums grown in Vermont are from sprouts. Some bear very little fruit, sometimes none, but generally they are productive; when sprouts are from varieties that are good bearers, always so.

Some sixty years since a lady from Connecticut brought and planted pits from what she called the "Blue Gage," in her garden in this town. Among her seedlings was a medium-sized blue plum, which is propagated by thousands from sprouts. In an adjoining town, one of the first settlers raised one so closely resembling the Mirabelle both in growth of tree and fruit, that strangers call it such without any hesitation. The Lombard, or Bleecker's Scarlet, a well-known variety, was raised at Whites-town, N. Y. Judge Platt, of Plattsburgh, brought sprouts from the original tree, from which thousands of sprouts have been planted. From these varieties, and others I can name, trees from suckers or sprouts are uniformly great bearers.

As a plum is a rapid grower and early bearer, and as a sprout taken at two years old, tap-rooted, and planted as a standard or in the nursery, soon makes a bearing tree, and throws up no sprouts until they begin to decay, most people prefer them, so as to insure a constant succession with little trouble.

Any variety of plums may easily be had on their own roots by grafting large stocks near the ground, and after two years' growth plant them so as to have the bottom of the graft a foot below the surface; in three years after well rooted trees from the scions only may be had by cutting the graft from the original stock. I have the Washington plum three years bearing on its own roots, grown in this manner.

POETRY SOBERED DOWN.—I'm thinking of the time, Kate, when sitting by thy side, and shelling beans, I gazed on thee and felt a wondrous pride. In silence leaned we o'er the pan, and neither spoke a word, but the rattling of the beans, Kate, was all the sound we heard. Thy Auburn curls

hung down, Kate, and kissed thy lily cheek; azure eyes half filled with tears bespoke a spirit meek. To be so charmed as I was then had ne'er before occurred, when the rattling of the beans, Kate, was all the sound I heard. I thought it was not wrong, Kate, so leaning o'er the dish, as you snatched up a lot of beans, I snatch'd a nectared kiss. And a sudden shower made my eyes blind, and I neither saw nor stirred, but the rattling of the beans, Kate, was all the sound I heard.

For the New England Farmer.

DAIRY PRODUCTS.

In a late number of the *Cultivator*, is a statement of the produce of a dairy of 14 cows, the last season, all of the common or native stock of the country. This was 2920 lbs. of butter that sold for 25 cts. per lb. Supposing the season for the making of butter to have been six months, or twenty-six weeks, which is as much as cows will average, this will be about 8 lbs. a week to each cow. This is decidedly a good product; I do not remember to have seen a better—taking so many cows together. If such be the product, on the best farm, in the best counties of the State of New York, how can more than this reasonably be expected, on the shallow soil and threadbare farms of New England? I know that single animals are here and there found, yielding twice this amount or more;—but this is generally on extraordinary feed, or with extraordinary care and attention. What particularly arrested my notice, on reading this account, was, that all the cows were of the common or native stock of the country. As far as I have seen, or can learn from others, *seven-eighths* of all the butter made or brought to our markets, is from stock of this character. Why then puff imported breeds as superior to our own? If they really are so, would not the *money-making, practical men* have discovered this fact? Of itself, it tells the story. P.

For the New England Farmer.

WILL GAS KILL TREES?

Let the following facts answer the inquiry:—Two years since, there stood in vigorous, growing condition, on the westerly side of Washington Street, in this town, a splendid elm tree, three feet in diameter, supposed to have been there seventy years, shading a circumference of three hundred feet. The gas pipe was taken up the street, in the centre to a point opposite the tree, and was heedlessly left, so insecure, that the gas when let on escaped and saturated the region all around. It was imbibed by the fibres of the tree, and in June following, its deleterious influences became unmistakably apparent. Every imaginable effort, by digging about, watering and fertilizing, was tried, with no good effect;—it languished, till the falling of the decayed branches admonished of the insecurity of its remaining. It now lies prostrate, with perfect evidence that it fell a victim to this subtle, invisible fluid. The fact is mentioned as an admonition to beware of the escape of gas—especially, in the region of *elms*. It does not have the same effect on horse chestnuts, the mountain ash, and other trees—but it is *death to the elm*. P.

South Danvers, May 1, 1856.

For the New England Farmer.

ON CERTAIN BIRDS THAT MIGHT BE DOMESTICATED.

MR. EDITOR:—It was the opinion of Audubon, the great American ornithologist, who does not seem to have been actuated by visionary notions, that several species of our indigenous birds are susceptible of domestication, and might prove useful additions to our present domesticated stocks. I have taken some pains to collect his remarks on this subject, and to transcribe them, along with his description of the species which he recommends for such training.

I. *The Canada Goose—Anser Canadensis*.—This bird is already domesticated, and is too well known to require a description. Audubon says, "In the nests of those which I have had in a domesticated state, I have sometimes counted as many as eleven eggs, several of these, however, usually proving unproductive. The eggs measure, on an average, 3½ inches by 2½, are thick-shelled, rather smooth, and of a dull yellowish-green color. The period of incubation is 28 days. They never have more than one brood in a season, unless the eggs are broken or removed at an early period.

"The crossing of the Canada goose with the domestic species has proved as advantageous as that of the wild with the common tame turkey; the cross-breed being much larger than the original one, more easily raised and more speedily fattened. This process is at present carried on to a considerable extent in our Western and Eastern States, where the hybrids are regularly offered for sale during autumn and winter, and bring a higher price than either of the species from which they are derived."

II. *Wood-Duck—Anas Sponsa*.—This beautiful species ranges over the whole extent of the United States. It also occurs sparingly, during the breeding season, in Nova Scotia, but further north Audubon has not seen it. Every where in this immense tract he found it a constant resident, some spending the winter even in Massachusetts. It confines itself entirely to fresh water, preferring at all times the secluded retreats of ponds and creeks that occur so frequently in our woods.

"The flesh of this bird is excellent; its feathers are as good as those of any other species, and I feel well assured that with a few years of care, the wood-duck might be perfectly domesticated, when it could not fail to be as valuable as it is beautiful."

I have been informed that Mr. Webster once had several of these beautiful birds in a domesticated state on his farm in Marshfield.

III. *Eider Duck—Fuligula Molissima*.—"The Fuligula (says Audubon) are distinguished from all other ducks, that feed in fresh or salt water, by the comparative shortness of the neck, the greater expansion of their feet, the more depressed form of their body, and their power of diving to a considerable depth, in order to reach the beds on which their favorite shelly food abounds. Their flight differs from that of the tame ducks, being performed nearer the surface of the water. They differ, moreover, in their propensity to breed in communities, and often at a very small distance from each other, and they are more ready to abandon their females the moment incubation has commenced.

"The Eider is seldom seen further south, along our coast, than the city of New York. It breeds in many places on the coast, from Boston to Labrador where they are very abundant.

"It is by no means difficult to rear the young ones, provided proper care be taken of them; and they soon become quite gentle and attached to the place set apart for them. A fisherman of Eastport who carried eight or ten of them from Labrador, kept them several years in a yard close to the water of the bay, to which, after they were grown, they daily betook themselves, along with some common ducks, regularly returning on shore towards evening." He adds, "I have no doubt that if this valuable bird were domesticated, it would prove a great acquisition, both on account of its feathers and down, and its flesh as an article of food. I am persuaded that very little attention would be necessary to effect this object. When in captivity, it feeds on different kinds of grain and moistened corn meal; and its flesh becomes excellent."

IV. *Dusky Duck—Black Duck—Anas Obscura*.—This species which has already been domesticated in several places, and was quite common twenty years since in our farm-yards, in the vicinity of Boston, extends its migrations from the coast of Labrador to Texas, and breeds in both these countries. The young grow with remarkable rapidity, and like those of the Mutton, of which they seem to be only a variety, acquire the full beauty of their spring plumage, before the season of reproduction commences.

"The young of this species (says Audubon,) in the early part of autumn, afford delicious eating, in my opinion, very much superior, in this respect, to the more celebrated canvas-back duck. That this species should not before now have been brought into a state of perfect domestication, only indicates our reluctance to augment the comforts which have been so bountifully accorded by nature to the inhabitants of this happy country."

V. *Blue-winged Teal—Anas Discors*.—"The Blue-winged Teal is easily kept in captivity, and soon becomes very docile. In this State it feeds freely on coarse corn meal, and I have no doubt it could readily be domesticated, in which case, so snowy and tender is its flesh, that it would quickly put the merits of the widely celebrated canvas-back duck into the shade."

VI. *Gadwall Duck—Anas Strepera*.—This species is found along the whole of our Atlantic coast, from Maine to Texas. From the following note of Dr. Bachman, addressed to Audubon, we may judge how easily this fine species might be domesticated. Says Dr. B., "In the year 1812, I saw in Dutchess County, in the State of New York, at the house of a miller, a fine flock of ducks, to the number of at least thirty, which, from their peculiar appearance, struck me as different from any I had before seen among the different varieties of the tame duck. On inquiry I was informed, that three years before, a pair of these ducks had been captured in the mill-pond. They were kept in the poultry-yard, and it was said, were easily tamed. One joint of the wing was taken off to prevent their flying away. In the following spring they were suffered to go into the pond, and they returned daily to the house to be fed. They built their nest on the edge of the pond and reared a large brood. The young were perfectly reconciled to domestication, and made no attempts even at the migratory season to fly away, although their wings were perfect. In the following season they reared large broods. The family of the miller used them occasionally as food, and considered them equal in flavor to the common duck and mor-

easily raised. The old males were more beautiful than any I have examined since; and as yet domestication had produced no variety in their plumage."

I should like to ascertain, through the pages of the *N. E. Farmer*, whether any of this stock to which Dr. Bachman refers are still in existence; and whether any serious efforts have been made in any part of this country to domesticate any other species not named in this communication. The number of species of the feathered tribe which have been reduced to perfect domestication is exceedingly small, and every new species thus rendered subservient to the use of man must be a valuable acquisition.

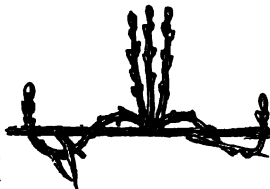
WILSON FLAGG.

LAYERS.

By the term "layer," as applied by horticulturists, is meant simply a shoot, or surcle, which, while yet attached to, and constituting a portion of the tree from which it is contemplated to be taken, is bent down and covered with soil till it has radicated or taken root. It is then detached from the parent, and considered a distinct plant, inspired by the identifying principle of life, and capable—under favorable circumstances—of perpetuating its kind.

The most favorable time for the performance of this operation, is just before the ascent of the sap, or when it is fairly up—that is, in the early spring, or mid-summer. The sprig or limb on being bent down, should be half separated by a clean cut on the under side, extending through the outer barks and the alburnum or sapwood, to facilitate the formation of the *nucleus* the first season. It may be proper here to observe, that by making the incision much deeper than this, the injury thereby caused to the circulating powers will necessarily prove detrimental, if not immediately fatal to the plant; the channel of the sap, which is the life-blood of the tree, being intermitted by the deep cut, or at least so much diminished in its capacity as not to yield a sufficient quantity of nutriment to the new plant. In some species, remarks an experienced horticulturist, and particularly in delicate sorts, it is not sufficient to cut a notch, merely, because, in that case, the descending sap, instead of throwing out granulated matter, in the upper side of the wound, would descend by the entire side of the shoot; therefore, besides a notch formed by cutting out a portion of bark and wood, the notched side is slit up at least an inch, separating it by a bit of twig or small splinter of stone or wood. The end of the layer which remains above the surface of the ground should be raised nearly upright.

Grape vines, when bent down in this manner, and



covered with moist soil to the depth of three or four inches, take root immediately, and when divided from the parent stock, and set in good soil, make thrifty and vigorous vines. Some of the finest and most prolific bearers we have ever seen, were started in this way. The grape may be also propagated by cuttings. These should be selected from the matured wood of the last year's growth, and cut into lengths, having three buds each. In planting, set the cutting pointing to the south, and cover two of the buds only, leaving the third even with the surface of the soil. Irrigation will be necessary, if the weather is dry, or the soil destitute of moisture. If the soil is rich, a very small quantity of manure will be required, but it should be of the best kind. A compost made of the tendrils and leaves of the grape vine, mixed with plaster, is an excellent article for this purpose, and should be applied when practicable.

HOW COAL WAS MADE.

Geology has proved that, at one period, there existed an enormously abundant land vegetation, the ruins or rubbish of which, carried into seas, and there sunk to the bottom, and afterwards covered over by sand and mud beds, became the substance which we now recognize as coal. This was a natural transaction of vast consequence to us, seeing how much utility we find in coal, both for warming our dwellings and for various manufactures, as well as the production of steam, by which so great a mechanical power is generated. It may naturally excite surprise that the vegetable remains should have so completely changed their apparent character, and become black. But this can be explained by chemistry; and part of the marvel becomes clear to the simplest understanding when we recall the familiar fact that damp hay, thrown closely into a heap, gives out heat, and becomes of a dark color.

When a vegetable mass is excluded from the air, and subjected to great pressure, a bituminous fermentation is produced, and the result is the mineral coal—which is of various characters, according as the mass has been originally intermingled with sand, clay, or other earthly impurities. On account of the change effected by mineralization, it is difficult to detect in coal the traces of a vegetable structure; but these can be made clear in all except the highly bituminous caking coal, by cutting or polishing it down into thin, transparent slices, when the microscope shows the fibres and cells very plainly.

From distinct isolated specimens found in the sand stones amidst the coal beds, we discovered the nature of the plants of this era. They are almost all of a simple cellular structure, and such as exist with us in small forms, (horse tails, club masses and ferns,) but advanced to an enormous magnitude.—The species are all long since extinct. The vegetation generally is such as now grows in clusters of tropical islands; but it must have been the result of a high temperature obtained otherwise than that of the tropical regions now is, for the coal strata are now found in the temperate and even the polar regions.

The conclusion, therefore, to which most geologists have arrived is that the earth, originally an incandescent or highly heated mass, gradually cooled down, until, in the carboniferous period, it fostered a growth of terrestrial vegetation all over its surface, to which the existing jungles of the tropics are mere barrenness in comparison. The high and uniform temperature, combined with greater proportion of carbonic acid gas in the manufacture, could not only sustain a gigantic and prolific vegetation, but would also create dense vapors, showers and rain; and these again, gigantic rivers, periodical inundations, and deltas. Thus, all the conditions for extensive deposits of wood in estuaries would arise from this high temperature; and every circumstance connected with the coal measures points to such conditions.

For the New England Farmer.

ONION AND TOMATO vs. PEAR TREE.

It has been observed by some that Peruvian guano, in proper quantities, was an excellent manure for pear trees. Some have found that the gatherings at a blacksmith's shop, where the solid excrements of horses and oxen were gathered with the parings of hoofs, charcoal dust, iron filings, &c., made a compost most highly valuable for pear trees.

On the other hand, a variety of facts have come to my knowledge, which show the danger of planting onions, tomatoes, and such plants as require a very large amount of nitric acid, or, perhaps, I should say, of ammonia, in their formation, near pear trees.

Very valuable trees have been killed, where it was evident that it was to be attributed to growing tomatoes about the trees. Onions have sometimes done mischief in a similar way to pears.

I do not pretend to *know* why it is; but I *suppose* that it is because the pear must have nitric acid for its growth; and that tomatoes and onions draw it from the soil in the form of ammonia so severely, that they deprive the pear tree of its indispensable food. Has nobody wondered what ailed the pear trees, when they were "trying titles" with a crop of tomatoes or onions?

Assonet, May, 1856.

A. G. COMINGS.

For the New England Farmer.

NATIVES LOOKING UP.

We learn that Mr. H., of South Danvers, has recently sold his cow, of which mention has been made in your paper, for the sum of \$150, to a gentleman, who intends to raise her offspring. This is as it should be, and as it was when the venerable farmer of Quincy purchased the famous Oakes cow for a like purpose. If we would be true to ourselves, no reasonable opportunity of improving our own stock should be permitted to pass without use. We are not unmindful that sales of foreign stock are often made at sums greatly in advance of this; but we cannot well understand, why nineteen quarts per day, (beer measure,) is not worth as much from a first rate native cow, as from any other. We have entire confidence this quantity was given the last season, by this animal, on grass feed alone, and that her butter products have been of the very best quality.

May, 1856.

POPULAR FALLACIES.

It is not true that sugar candies are of themselves injurious to the teeth or the health of those who use them; so far from it, they are less injurious than any of the ordinary forms of food, when employed in moderation.

Any scientific dentist will tell you, that the parts of teeth most liable to decay are those which afford lodgment to particles of food; such particles being decomposed by moisture and heat, give out an acid, which will corrode steel as well as teeth; but pure sugar, and pure candies are wholly dissolved, there is no remnant to be decomposed to yield this destructive acid; we remember now no item of food which is so perfectly dissolved in the mouth, as sugar and candy. When visiting the sugar plantations of Cuba, the attention was constantly arrested by the apparently white and solid teeth of the negroes who superintended the operation of cane grinding; they drank the cane-juices like water, there was no restraint as to its use, and the little urchins playing about, would chew the sugar-yielding cane by the hour. It is much the same in Louisiana, where the shining faces and broad grins of the blacks are equally indicative of exuberant health and "splendid teeth."

How does it happen, then, that there should be "the prevalent belief" that sugar and sugar-candy destroy the teeth and undermine the health? Perhaps the most correct reply is *tradition*, the father of a progeny of errors in theory and practice; of errors in doctrine and example, "too tedious to mention."

One of the common faults of the times is an indisposition to investigate on the part of the masses. We take too much for granted. A very common answer to a demand for a reason for a time-honored custom is, "*Why, I have heard it all my life. Don't every body say so?*"

It would be a strange contradiction in the nature of things, if sugar and candy in moderation should be hurtful to the human body in any way, for sugar is a constituent of every article of food we can name; there is not a vegetable out of which it cannot be made, not a ripe fruit in our orchards which does not yield it in large proportions, and it is the main constituent of that "milk" which is provided for the young of animals and men all over the world. Perhaps the child has never lived, which did not love sweet things beyond all others; it is an instinct, a passion, not less universal than the love of water. A very little child can be hired to do for a bit of sugar, what nothing else would. The reason of this is, that without sugar, no child could possibly live, it would freeze to death; it is the sugar in its food which keeps it warm, and warmth is the first necessity for a child.

But to use this information intelligently and profitably, it must be remembered that sugar is an artificial product, is a concentration, and that, if used in much larger proportions than would be found in our ordinary food, as provided by the beneficent Father of us all, we will suffer injury. We should never forget that the immoderate use of anything is destructive to human health and life, if persevered in. The best general rules to be observed are two:

1. Use concentrated sweets at meal times only.
1. Use them occasionally, and in moderation.

Hall's Journal of Health.

THE BALDWIN APPLE.

The persons who met on Monday last to take initiatory steps in relation to placing a monument on the spot where the first Baldwin Apple tree stood, had a general discussion of the subject, and appointed the following gentlemen as a committee to take further steps in the matter, viz :

MARSHALL P. WILDER, Dorchester,	} Committee.
JAMES F. BALDWIN, Boston,	
ASA G. SHELDON, Wilmington,	
SILAS BROWN, Wilmington,	
JOSEPH REYNOLDS, Concord,	
SIMON BROWN, Concord,	
THOMAS D. BOND, Wilmington,	

The chairman, Col. WILDER, is requested to call another meeting, at such time and place as he may think proper. **SIMON BROWN, Secretary.**

NEW EXPERIMENTS IN CHURNING CREAM.

[Our readers are aware that we do not usually attach great importance to "theories," (as the term is commonly understood,) until they are tested by practical trial. We insert the following for the experiments it details in connection with the suggestions of theory, and invite attention to the subject.]

I have something amusing to tell you, to set you to thinking of a new theory of churning, and should you approve of the theory perhaps your lady readers would be gratified at the prospect of getting the long-looked-for, perfect churn. The thought occurred to me that to rupture the globules of cream perfectly and expeditiously, it should be done by a force-pump, ejecting a stream of 3-16 or 1-4 inch with great velocity, against a hard substance, or into itself. Much to the amusement of my family for trying to do that which thousands have failed doing, I procured a pint syringe and a quart of cream, and commenced squirting it into itself; when lo, the butter developed itself shortly. I then borrowed a little force-pump, and again succeeded. I then had a tin pump, 2½ inches diameter, 11 inches long, made, and gave it a good trial. I found the cream would soon break, but that it required a common churn to finish it by aggregating the butter as a gatherer. I have concluded, my plan is to provide for all churns, a breaker, thus performing much the most important labor, and greater production. My theory is to rupture the globules by sufficient concussion in once passing the cream through, by giving it sufficient force, ejecting the stream of cream against a hard substance, or into itself. I thus get all the butter in a much shorter time.

I propose to have got up a breaker by itself separately, or to be added to present churns; if made separately, have a simple force-pump attached to a board or frame, under which place the crock of cream to be broken; pass the cream from the pump into the churn.

Our present churns are good gatherers, but all churns to be perfect, must have a breaker to do the main work. The present mode of churning is a good deal like taking a stick to crack a pile of walnuts; one nut protecting the others from con-

cussion, renders it tedious and imperfect. The present dashers produce insufficient concussion to expeditiously and perfectly break the globules; hence less product of butter, and constant disaffection with all churns.

EDGAR CONKLIN.
Country Gentleman.

For the New England Farmer.

A HINT TO FARMERS.

Spring, lovely and charming spring, has come again. All nature about us is rapidly throwing off its wintry garb, and putting on its beautiful garments, all fresh and new, of Spring. How apt an illustration of the seasons of life, death and the resurrection of man! What more noble employment than that of the thoughtful and intelligent tiller of the soil? God's great book of instruction, to all who study its pages—so full of wonder, interest, and all that is ennobling to the soul of man. He indeed must be a dull scholar who cannot look from nature up to nature's God, and behold in his works an allwise, intelligent, great first cause. Farmer, this great volume of intelligence is constantly open before you; you behold it every step you take over your broad acres, the wisdom and beneficence of a merciful Creator; and he who does not see this and let its teachings pervade his soul, and uplift his heart in gratitude to that Creator, is little better, than the cattle upon his many hills. Dull and stupid must be the mind which is brought in constant contact with the works of God, and not see in them the beauties and wisdom of an eternal and omnipotent power. This instruction book, the farmer has ever before him. Aside from this, how cheering the promise of his word to you—seed time and harvest shall continue till the end of time. The former and the latter rain, God will give in its season. Thank God, things are not now-a-days as they were wont to be. There is an inquiring intelligence among the farmers, such as those tillers of the soil in by-gone days little thought or dreamed of. There is no branch of human industry that has made greater or more rapid improvements than that of farming, in the broadest acceptation of that term. We have reason to believe that this will continue to be the case. Who cannot see that there is a different class of minds engaged in this business than formerly. To be successful now, the head must work as well as the hands, and the more they go together, I believe, the greater the success.

Heretofore, the farmers have used the hands too much, and their heads not enough; but let them work intelligently together, and the result is greater, and the farm, as well as the farmer, will constantly improve. All past experience proves this to be true. For one, I thank the agricultural press for what they have done, and are still doing in this great matter. Farmers, I want you to appreciate these things more, and give them your helping mind and hand.

April, 1856.

NORFOLK.

AN EXCELLENT REMEDY FOR HORSES THAT PULL ON THE HALTER.—Put on a strong harness with good breeching, and a long strong halter, and bring that down through the collar; fasten him to something he cannot move. He will make but few attempts before he gives it up, and in this way he can be broke of it.—*Country Gentleman.*

For the *New England Farmer*.

LETTER FROM MR. FRENCH.

DRAWING WATER—HYBRID PLANTS—BREEDING LIVE STOCK.

MY DEAR BROWN:—Charles Lamb once said, that what people call "easy writing" is generally very hard reading. Whether this be so or not, it is my prevailing sentiment, just at present, that I shall not put a great deal of hard work into any kind of writing, till after planting.

If there is any reader of the *Farmer* who has been shut up the past four weeks in a court-room, with a farm or two awaiting his personal attention, he will sympathize with us, who feel as if the "time to plant" had precedence, just now, over the privilege of talking or writing about it.

The weekly *Farmer* of to-day suggests some topics, of which a few words may, perhaps, be "fitly spoken," without the exercise of very hard writing, or, I trust, of very hard reading.

WATER FOR THE FARM.

You speak of a "Water Lifter," of which an engraving is expected for the *Farmer*, to be worked by the animal that drinks. It is easy to conceive that such a machine might be arranged, to be operated by the weight of the ox or cow standing on a platform at the trough. A man who ever saw your chicken feeder, which so delighted the members of Congress at Washington, when you were nothing but librarian of the House of Representatives, and had not arrived at the dignity of principal editor of the *New England Farmer*—a man who saw the door of the corn bin fly open by the weight of the astonished biddy as she was peering round for a hole through which to extract the grain, which she knew was shut up there, never will be surprised to see a cow pump all the water she wants to drink, and a little besides to fill up the can, if she does not afford quite milk enough!

Speaking of animals drawing water, of course reminds us of the water ram, which, by the way, is one of the most beautiful and practically successful applications of science to everyday life that has ever been discovered. Everybody knows, or ought to know, that this machine, at a very small cost, some eight or ten dollars for the ram itself, wherever a fall of four or five feet, with water enough to supply an inch and a half pipe, can be obtained, will throw a certain proportion, say a seventh or tenth of the water, to a reservoir at any desired height above the head of water. I recently saw one in operation at Manchester, N. H., which had worked as regularly as the beating of the human heart, through the whole winter, without cessation for a minute, supplying a household with water which was first thrown by the ram into a reservoir in the attic.

Where no fall can be obtained and the water must be pumped, windmills have been used, with various success.

The great obstacle to their use has been, that with sufficient surface of wings to furnish power in a moderate breeze, the machinery is broken by sudden tempests. To obviate this difficulty, various inventions have been tried, so that the sails or wings may be filled by the wind itself when it increases beyond a safe point.

So far as I have seen, the objection to this power is its expense. The wind is cheap enough, but it has its old trick of blowing "where it listeth," and a somewhat complicated arrangement is requisite to "raise the wind" when it does not feel much like working, and to fetter its pinions, when it gets high and is determined on a blow. However, all this about windmills, is it not already written in the pages of the *New England Farmer*?

The best way in the world to have water is, to find a spring high enough, put in an aqueduct of logs or something else that will not give the family the lead paralysis, and "as the boy said of the molasses" in the Knick Knacks, "let her run." Water is always willing to run down hill, and has decided objections to the contrary course. My own barn is supplied by a lead pipe from a spring, and my house by iron pumps, in both stories, which draw from a well about ten feet deep.

In conclusion, let me say to all who are building, that the less machinery is used in conveying water, especially in this freezing climate, the less care and vexation is in store for you.

MIXING OF PLANTS.

This number contains an article on the "mixing of potatoes," which I do not propose to criticise, but merely use as a text.

There are some principles that seem to be settled about this matter of *Hybridizing*, or *Cross Breeding*. In the blossoms of most plants the seed or fruit is the offspring of the *stamens* and *pistil*, which may be considered the male and female, growing in the same flower usually, though sometimes in different flowers of the same plant, and sometimes in the flowers borne by different plants or trees. When the female flower is impregnated by the dust or pollen from a male flower of a different species, the product is a hybrid or cross of the two species, partaking more or less of each, *the tendency being towards that species which is most permanent*. Hence plants which are nearly allied will mix in this way, if planted near together. Corn, melons, squashes and other annuals will mix the first year, as every body knows; but nobody ever knew potatoes to mix the first year, or any other year, unless the balls or seeds are planted, because the potato is not the fruit or the seed, but in the nature of a root. By planting the balls or true seed of the potato, where different kinds have been grown together, a great variety will be obtained. The seeds of the apple or pear or peach seldom produce their like kind, because their blossoms are

fertilized by different varieties. It is not uncommon to hear persons recommend some variety of peach as always producing from the stone the same variety.

There may possibly be varieties of the peach that will not mix with others, but it is very doubtful. Probably a stone from a peach tree, or a seed from an apple tree, that is so far from all other varieties as not to be reached by the pollen of another, will be found to produce its like, though it would not be contrary to analogies if the product of a mixed parentage should propagate a race of somewhat mixed qualities. I leave this question for the scientific members of the Massachusetts Horticultural Society, who understand it much better than I do.

This brings me to another topic of the same number—

THE BREEDING OF LIVE STOCK.

Some person, whose name is nameless, sends you a note, headed, "Natives looking up," which furnishes an excuse, if one is needed, for a word on this subject.

Some gentleman has paid \$150, it seems, for a native cow, intending to raise her offspring. If this cow is really an accidental cow, a cow that has no known parentage, the gentleman will probably share the ill success of others who have tried, so many times, the same experiment.

It requires something more than one cow to perpetuate a stock of cattle, and if the old way of "ordinary generation," as the catechism has it, is to be resorted to, the milking qualities of this animal's posterity—according to the generally received opinion—will depend more on "the company she keeps," than on herself. The tendency of hybrids, both vegetable and animal, is *towards the species most permanently established*. You might about as reasonably expect the stone of the largest peach on a tree, or the seed from the largest apple, to reproduce its like, as to expect this remarkable cow, compounded of accidental qualities, in unknown quantities, to produce a great milking stock. From a Devon bull, she will produce, generally, a Devon calf. From a less firmly established blood, or from a bull of like accidental parentage, she will produce a stock of average qualities, probably with their unknown ancestors, ringstreaked, speckled or otherwise, as chance, or some unfathomed law of Nature, may order. There is no objection to any gentleman paying a high price for a native cow, or to his attempting to establish a new and native breed, but there are serious objections to the dissemination of the idea, that these ill begotten, accidental great milkers are sure, or even likely to produce stock of this same quality.

The man who buys such an animal, admits the very principle claimed by those who breed blood stock. He thinks his cow will transmit an accidental

quality to her posterity, a quality which she did not acquire through any fixed quality of blood in her ancestors, while the breeders of the Ayrshires or Jerseys contend that it is more reasonable to expect that a fixed and uniform quality, uncontaminated by doubtful blood, will be contained in the progeny.

With no special interest in any particular stock, I feel bound to enter a protest against the idea, which often appears in the correspondence of the *Farmer*, that native stock, that is, stock of unknown, and of course, mixed blood, is as valuable for breeding, as that of established character.

Exeter, N. H., May 17th.

For the New England Farmer.

CATERPILLARS.

FRIEND BROWN:—The season for caterpillars has now arrived, and as usual, various receipts are published in our agricultural journals to destroy them. The best and most efficient way to destroy them I know of, is to rub the nest with spirits of turpentine, which can be easily done by tying a woollen rag to the end of a pole. Dip in the liquid, and just rub the nest; being very penetrating, the whole will be at once saturated, and the effect will be sure death to the inmates. Going over an orchard twice is usually sufficient for the season.—The nests frequently escape detection the first time, but one application is sure cure for the evil.

Yours truly,
Framingham, May 15.

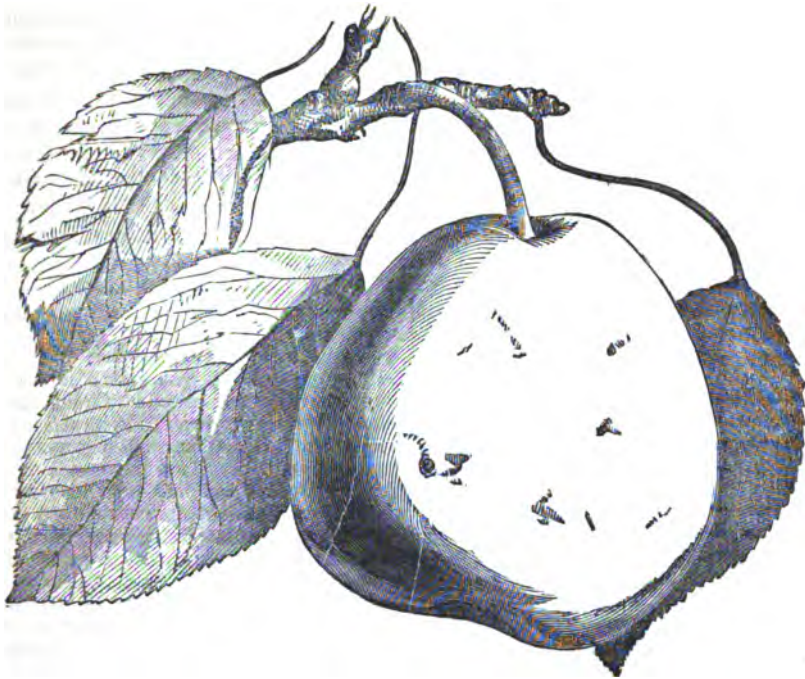
For the New England Farmer.

HOW TO CURE HAMS.

I have, for nearly thirty years, practiced curing my bacon in a pickle, made as strong with good salt as could be made, and then reducing it just one-half, by adding the same quantity of fresh water. This gives it the right seasoning without salt-petre, which, in my estimation, rather injures than benefits it. Sugar or spices may be added to suit the taste, or ideas of those who are to use the bacon; or the hams can be used without smoke. A similar pickle I find to be the best for beef used through the winter, and when the weather becomes warm, take it up, and give the requisite quantity of salt for summer preservation and use.

RUFUS MCINTIRE.

A LUXURY FOR ANIMALS.—It is related of Rev. Sidney Smith, that when on his farm, each cow and calf, and horse and pig, were in turn visited, and fed and patted, and all seemed to welcome him; he cared for their comforts as he cared for the comforts of every living being around him. He used to say, "I am for all cheap luxuries, even for animals; now all animals have a passion for scratching their back-bones; they break down your gates and palings to effect this. Look! there is my universal scratcher, a sharp-edged pole, resting on a high and low post, adapted to every height from a horse to a lamb. Even the Edinburgh Reviewer can take his turn. You have no idea how popular it is. I have not had a gate broken since I put it up. I have it in all my fields."



THE OLD ST. MICHAEL PEAR, OR WHITE DOYENNE.

There are few pears bearing so many names as this old, well known and excellent variety. In the region about Boston it is called the St. Michael; in New York, the Virgalieu; in Philadelphia, the Butter Pear; the English give it several names—among them that of Snow Pear and Pine Pear, as well as St. Michael. This confusion in names shows that the pear is extensively cultivated, and ranked among the best.

In his *American Fruit Culturist*, THOMAS says that it fails in many localities near Boston, but through inland New York and in most of the Western States, it is unsurpassed in its excellent qualities of hardy growth, fair fruit, delicious flavor, and great productiveness; many trees yielding ten or fifteen bushels of perfect fruit in a single season.

It is an old French variety, and was first brought into notice by the Dean of some religious corporation, and as we are not particularly anxious to immortalize the musty saints of the cloisters or cathedrals, perhaps we had better let the old Dean have the credit of so good an act as bringing such a pear into notice, and call it the *White* (doy-en-nay) *Doyenne*.

We have known this pear from our youth, and do not hesitate to say that if it can be ripened with-

out cracking, it is one of the best in our extended list. COLE gives the following description:—

Rather large; obovate; clear pale yellow, with small dots; a red cheek full in the sun; stalk an inch long, stout, in a small cavity; calyx small, in a shallow, finely plaited basin; flesh white, fine texture, melting, very buttery, of a rich, high, delicious flavor. Oct. and into Nov. Many regard this pear as a standard of excellence; many others prefer the Seckel. It is perfectly hardy in tree and fruit, and first-rate in quality in the Middle and Western States, in Western New York, and in the region of Baltimore; but it generally blasts and cracks in New England, on the sea-coast, yet it still flourishes in the interior. Where uncertain, it does better on the quince.

GIRDLED TREES.—The *Lowell Citizen and News* says that "tin placed about young apple trees will prevent the mice from girdling them. The material used is the tin of refuse cans, and costs one cent for each tree."

We saw an orchard in April where tin was used, and not a tree was injured—while many trees in the immediate neighborhood were ruined.

SEEDS.—We are under obligations to the Hon. Robert B. Hall, Chauncey L. Knapp, and the Commissioner of Patents, for various packages of seeds.

For the New England Farmer.

TURNIP CULTURE.

Having received, by way of the Patent Office at Washington, twenty-six kinds of turnip seed, which were sent from England for experiment, I last summer obtained a piece of ground, and tried them as well as I could. The result was more satisfactory than I expected it would be.

The seed was received so late as to forbid the best choice of ground for the experiment, it being some time in the month of June when it came to hand. A piece of mowing ground was obtained, which was first mowed. It was in such condition that half an acre did not yield more than 200 pounds of hay.

After taking off the hay, it was broken up, and not again worked except with the cultivator. The manure applied was estimated at eight cords of stable manure to the acre, worked in with the cultivator. To this was added, in the drills for ruta-bagas, and broadcast on the surface for those kinds which were to be sowed broadcast, of superphosphate of lime at the rate of 300 pounds to the acre. The soil was a sandy loam. There were four kinds of ruta-bagas, each kind occupying one square rod of ground. They were sowed on the eleventh of July, and harvested on the fifth day of November. The product of No. 1, Skirving's Swedish Turnip, was at the rate of 720 bushels to the acre, with 4 tons of tops. The product of No. 2, River's Stubble Swedish Turnip, 640 bushels, and 4 tons of tops. No. 3, Laing's Swedish Turnip, gave 640 bushels, with $3\frac{1}{2}$ tons of tops. No. 4, Green-topped Swedish Turnips, the rate of 880 bushels, with $3\frac{1}{2}$ tons of tops.

The amount of each kind was ascertained, and the product of one square rod multiplied by the number of square rods in an acre. The tops were weighed immediately after they were trimmed, that is, while they remained green.

Two of these kinds have proved to be extra fine for culinary uses, No. 2 and No. 4. At this time May 10th, they are as nice as any body could ask for.

The other twenty-two kinds were sowed broadcast, on the 24th day of July, and were harvested, on the 16th day of November. The product of these were at the following rates per acre, by the same way of computation above spoken of. No. 5, Ball's Hybrid Turnip, 885 bushels and 8000 pounds of tops. No. 6, Green-topped Six-weeks Turnip, 560 bushels, 4480 pounds tops. No. 7, Snow-ball Turnip, 600 bushels, 6360 pounds tops. No. 8, Strap-leaved Turnip, 700 bushels, 4800 tops. No. 9, Small Yellow Malta, 480 bushels, 4800 pounds tops. No. 10, White Globe or Norfolk White Turnip, 660 bushels, 8000 pounds tops. No. 11, Green Round or Norfolk Green Turnip, 440 bushels, 7360 pounds tops. No. 12, Green Globe, or Green Norfolk Turnip, 620 bushels, 8320 pounds tops. No. 13, Golden Ball Turnip, 440 bushels, 6400 pounds tops. No. 14 Red Globe or Norfolk Red Turnip, 500 bushels, 980 pounds tops. No. 15, White Tankard or Decanter Turnip, 400 bushels, 5760 pounds tops. No. 16, Green Tankard or Decanter Turnip, 400 bushels, 5640 pounds tops. No. 17, Yellow Tankard, or Decanter Turnip, 400 bushels, 5440 pounds tops. No. 18, Red Tankard or Decanter Turnip, 400 bushels, 6240 pounds tops. No. 19, Green-topped Scotch Turnip, 260 bushels,

6400 pounds tops. No. 20, Purple-topped Scotch Turnip, 240 bushels, 7040 pounds tops. No. 21, Skirving's Purple-topped Scotch Turnip, 400 bushels, 5920 pounds tops. No. 22, Early Stone or Stubble Stone Turnip, 320 bushels, 6400 pounds tops. No. 23, Yellow Stone Turnip, 240 bushels 8000 pounds tops. No. 24, Red-topped Stone Turnip, 640 bushels, 7040 pounds tops. No. 25, White Dutch Turnip, 480 bushels, 7200 pounds tops. No. 26, Yellow Dutch Turnip, 240 bushels, 4000 pounds tops.

We had so severe a drought from August 1st, for eight weeks, that no rain at any time wet anything below the mere surface of the ground. At the middle of September, and from that until near the first of October, the prospect appeared almost hopeless. Some of the kinds never recovered from the effect, scarcely in the least degree; and there is no reason to suppose that any of the kinds were near equal in product to what they would have been under more favorable circumstances.

Several of the late-sowed kind proved to be very fine for culinary purposes. Among these, the Small Yellow Malta, No. 9, for early use, and the Yellow Tankard, No. 17, for later use, appeared to claim first mark. The Green-topped Six-weeks Turnip, No. 6, was very early.

I have for a good while been thinking of preparing a few articles for the *New England Farmer* on *Turnip Culture*; but ill-health, and a doubt whether I could rank them worthy of the space they would occupy, has prevented. I have devoted considerable attention to the subject for a number of years, before leaving the Granite State.

Assonet, Mass., 1856. A. G. COMINGS.

SAVE YOUR PLUMS NOW.

We begin to think this can be done without Mr. Matthews, if not with him. We were yesterday on the grounds of one of our best horticulturists, and saw the application, and have some faith in its success. Our friend thinks there is no chance for mistake about its efficacy. He informed us that he applied it last year, after the curculio had begun its ravages, and that it not only saved those which were unstung, but many of the plums on which the insect had left his card, healed up and ripened well. The liquid enters the opened wound and destroys the egg. This is the only remedy he has ever found to avail against this slippery enemy of one of our best fruits. His recipe is—

One peck of unslaked lime,
Six pounds of salt,
One barrel of water.

The mixture is to be applied with a common garden syringe. If one application is not sufficient repeat it. A single application answered with him last year.

No time is to be lost, as the young plums are already set, and the enemy has begun to show himself. If a syringe is not to be had, sprinkle on the liquid in some other way. The mixture is cheap and easily applied, and every man who has a plum tree should try it. This is the most philosophical remedy we have yet seen suggested, and we commend it with more confidence than most new things to the notice of fruit-growers. If it answers our expectations, it will be worth millions to the country. Plums can be grown on loose, sandy loams as well as on clay soils, to which they have hitherto been

mainly confined, on account of the ravages of this insect. The cultivation of this fruit may be indefinitely extended, and we may make our own dried plums, instead of importing them from France.

Those who have Mr. Matthews's remedy in keeping should hurry up their secret, or they will be too late for the fair.—*American Agriculturist.*

THE CURCULIO.

The curculio was the corn weevil of the Romans, and caused them considerable trouble before it emigrated to this country. It still does a good deal of mischief, thinking, we suppose, that it has as good a patent, to live, multiply, and replenish, as any other folks, and it does not hesitate to avail itself of such means as are best adapted to promote the ends it has in view. So it lights on the fair plum, the beautiful cherry, apricot or apple, makes a little crescent shaped incision, and deposits a delicate, tiny, white egg in it, where it is surrounded by the juices of the tender fruit. Then with some of its peculiar varnish—an exact recipe for which we believe is not to be found in the books—it seals over the wound it has made, so that it is proof against sun, wind and rain. But not knowing what accident may befall this particular egg, like a prudent skipper, who always has “an anchor to windward,” it goes to another, and another, and so on, *ad infinitum*, to other plums, and peaches, and apples, in its eagerness to keep the race good, until one-half, sometimes more, of the young fruit has in it the element of its own destruction. The egg produces a little white grub, which feeds its way gradually to the centre of the fruit, destroys its vitality, and it falls to the earth, where the grub is transformed into a winged insect, the perfect curculio, who will be just as eager to lay eggs, and propagate its kind, as its mother was before it.

Here they are now, in their different stages of growth, and one of them in the very act of obeying the all-prevailing instinct of its nature.



1. Curculio in the perfect or beetle state, as large as life.
 2. Its assumed form, when disturbed, or shaken from the tree.
 3. Larva, or worm, as found in the fallen fruit.
 4. Pupa, or chrysalis form, in which it lies in the ground, and the last stage before the perfect state.
- On the figure of a plum are the crescent-shaped marks as made by the insect.

Well, they are not made in vain, did not choose their own instincts, and if they destroy what we desire to preserve, we must devise some way to prevent it, or suffer the loss. To say how to avert it, is the object of this writing.

Various methods are resorted to, which partially prevent the mischief, but are mostly either too expensive or inconvenient. Some have covered very

fine plum trees entirely with gauze, others smoke the limbs with tobacco smoke, or that of some other drug. We have known the fruit of large trees saved by boring the tree, inserting a plug, and by striking it with a large mallet, jar the insects down upon cloths spread under the tree. But this mode is tedious, as it must be done several times in each day. We have practiced a remedy for several years, and never have failed in it, when it has been faithfully attended to. It is this: as soon as the fruit becomes of the size of a common pea, shake fine ashes, plaster, or lime over it, from some convenient thing. We use a “corn popper,” fastened on a pole of any desired length, and prefer air-slaked lime to put in it. Sift it upon the fruit twice a week, after a shower, or when it is covered with dew.

Now, gentlemen, and ladies too, if you will send to the *Farmer* office one-tenth of the fruit that may be saved by this cheap and simple remedy, we shall be content with our share of the blessings of Pomona the coming season.

For the New England Farmer.

MIXING OF POTATOES.

MR. EDITOR:—Will potatoes mix, or will they not, when different varieties are planted in close proximity, is a question which will find many able supporters on either side.

What we have seen and proved by actual experiment, regardless or not of what we have read or heard, we are very apt to believe, for “seeing is believing,”—a belief founded upon the strongest possible terms in our own minds. Actuated by such a belief founded upon practical experiment, do I offer a few remarks upon this important subject, hoping thereby to erase from the minds of many the erroneous idea they have long entertained, that potatoes never will mix in color or quality, however near different varieties may be planted to each other.

I am not prepared at present to believe that potatoes will mix in *quality*; that a Peach-blow planted in the spring, beside, or even in the hill with a Carter, will in the fall, when dug, prove to have lost its individuality and brought forth good nice Carters, both in quality, size and color. This to me, would be believing what I think never was known or heard of, and would at once set aside that established law of nature, “like produces like.” Now I have all due respect to this long established law, but I am oftentimes led to think it almost contains an inconsistency; perhaps it does not mean that “like will produce like” in color and form, but only in quality; yet upon this point I am led to doubt, for why should I not, when in the spring I take my different varieties of corn, and plant eight or ten rows of one kind, and the same of another, and so on, until I have my field all planted, and in the harvest, I find two, three, four, or perhaps more different varieties in color, size, and quality, all upon one single ear. That this is the case where different varieties are planted in close proximity, every practical farmer and intelligent reader of your paper knows.

Then shall we say "like produces like," or, shall we say, "like produces like" in quality, but not in size or color. We can say, and perhaps that is the true meaning, corn will produce in a good season corn, and that potatoes will produce potatoes, but that they will produce the same in form or color, we cannot say, when different varieties are planted together. That some varieties of potatoes will never mix in any way, I as yet believe, but that there are many that will, I know, and if a reader of your paper doubts my authority in this statement, I can show him a bushel or more of Jenny Lind or California potatoes, raised from seed planted last spring of light red color, but which were planted close beside a field of Carters, and when dug last fall, were as perfectly white in color as any Carters I ever raised. In shape and size they are like the original seed, and the quality remains the same, and in my opinion ever would, if planted beside different varieties forever. That they will mix in color as well as Rohans, Pink-eyes, Early Blues, &c., &c., and diminish in size, by being planted all varieties within one hill or in the same field, I fully believe; but that they will change or mix in quality I am yet to be convinced.

Ashfield, 1856.

JOSEPH BLAKE.

THE HAPPY LOT.

O, happy, blest of all his race,
The man who tills the soil;
Whose spring and harvest hopes in place,
Come sweet'ning every toil.
Were mine a field of waving grain,
A mead with "cattle sprinkled o'er;"
A wood, to tempt the warbling train;
Before my house a grassy plain,
Descending to some shore;
In joyous ease I'd spend my life,
In spite of Fortune's frown;
Nor e'er like Lot's undulous wife,
Regret the noisy town.
Farewell, the counting-house and store,
Amid the city's din;
My eyes and ears be vexed no more,
With, "Lend me, Sir," without the door,
And "Sir, your note," within.
Lord help the man who spends his days
In borrowing and lending;
Dogged here and there a hundred ways;
Yet times are never mending.
Be mine the wagon, plow and spade,
'Tis man's first destination.
With health and plenty more than paid,
I'd take my cheer, and shake my head
At fools of rank and station. FREDERICK HAYLOFF.

IVY.—By a little management you may have your ivy to cling perfectly. Whenever a branch grows without attaching itself to the wall, cut off the loose part close to a leaf beneath which the attachment is perfect. Continue this process till the wall is covered, and ever afterwards cut away all hanging branches, or by the force of the wind they will detach others beside themselves. When the ends of growing ivy once lose their hold, they are never still sufficiently long to be able to attach themselves; but, by cutting away to the point of contact, they are enabled to proceed to the new growth, and thus hold fast. Cut off the hanging branches as soon as seen; for, by swinging about in the wind, the injury is constantly increasing.

For the New England Farmer.

PURCHASING FRUIT TREES.

MR. EDITOR:—Why buy bad fruit trees? I have bought and set within the last nine years, about 400 apples, 175 pear, as well as cherry, plum, and other fruit trees; and experience has taught me to keep away in future from buying any trees, than such as are of the very best quality. Indeed, no farmer can afford to set and nurse a bad fruit tree. I bought, nine years ago this time, 60 trees, mostly Baldwins, of Dea. Leland, of Sherborn, paying him 75 cents each, and these trees were set on about one acre in a lot of three acres, and are now as fine trees as I have seen anywhere in my travels. When seven years old, they produced twenty barrels of as fine apples as can be found of the kind.

The next spring—eight years ago—I bought 40 apple trees from a nursery thirty miles south, and being somewhat particular about the quality, it was agreed that I have my choice out of a large lot of trees, at 31 cents each. These were carefully taken up, brought home, and set on the same lot with the others, and have always been cared for in a like manner. Yet they are so far behind the Sherborn trees, that I would gladly pay five dollars each, to make them equal to the first named, and I doubt not there will be twenty dollars difference in ten years more. Two years after this, I went back to Sherborn, and bought 100 more like the first named, and a few more have been bought of Col. Wilder, of Dorchester; his charge was one dollar each, and altogether the cheapest tree I have ever bought, never having lost a single tree, and all that he has sold me at that price will prove cheaper in the end than the Sherborn trees if given to me, or the 31 cent trees, if the seller had given me ten dollars each to take them for nothing. Now this is my experience and judgment.

The land on which these trees stand is good, and of the same quality—all having been thoroughly under-trenched and drained.

I have bought within the last four years 150 pear trees of Marshall P. Wilder, of Dorchester, paying him one dollar each, for standards (that is, pear on pear roots,) and never lost a single one by re-setting, or otherwise, and many of them gave fruit the second year. All of them had fine, healthy roots and trunks, and have made as much wood as could be desired in the time. Four years ago, a man came on from Long Island with a few hundred quite as good looking pear trees as I ever saw at any nursery, and after selling in Worcester and vicinity at 50 cents each, brought to me a bundle of 25 trees, and insisted that I should set them at the side of my trees bought the year before of Col. Wilder, and after much importunity, I permitted him to leave them, which he did, and at this time, the second year after, I have but four alive, after bestowing quite as much labor on them as the others. I this spring ordered enough from Col. Wilder at \$1 each, to take their places; and I have this morning just finished pulling up the Long Island trees and setting those that I have entire confidence in. Now, Mr. Editor, whilst I feel sore in mind, body and estate, particularly about this last transaction in pear trees, I consider it my duty and privilege to warn all my brother farmers never to buy trees of a travelling agent at any price, as they generally are the gleanings of a badly managed nursery; besides, if you have any reputation,

it is generally used pretty freely by these travelling agents to induce others to buy, saying that Mr. Such-an-one bought freely of him. The same can safely be said of those who are out selling superphosphate, and guano, and other fertilizers.

Respectfully yours,
Sutton, May 9, 1856. HARVEY DODGE.

AGRICULTURAL ADDRESS.

We have received an Address delivered before the *Windham County Agricultural Society at Brooklyn, Conn.*, by the REV. ALEXANDER H. VINTON, of Boston. We have often noticed Mr. Vinton in the agricultural meetings at the State House, and are happy now to find his light shining in a more public manner. His address is written in a pleasant, attractive style, and abounds with excellent suggestions. The farmer is indebted, considerably, to the physician for aid in agricultural progress, but more to the clergy than to any other class. They have the opportunity and the intelligence—where they have the taste—to work in agricultural matters more scientifically than most of us are enabled to do. With the pen always at hand, also, they note the results they gain and are able to give them intelligibly to the world. For want of space we are obliged to content ourselves with the following extracts from this excellent address:

"Agriculture has exacted tribute of mineralogy, and has sometimes saved money by knowing the difference between limestone and silex. Natural philosophy has paid her tribute to agriculture, in the shape of water-rams, and drains, and horse-powers. Botany has taught her the principles and laws of vegetable life, and how to cross her breeds or keep them pure. Entomology has lit its candle and introduced her to the domestic manners and habits of weevils, borers and caterpillars. It is not quite time yet to say how much agriculture has been aided by astronomy; but if it shall be determined satisfactorily that pork shrinks in the pot, or timber takes on decay according to the time of the moon, then so much at least of astronomy will be necessary to the farmer as to teach him when that luminary is in her growth or wane.

"We have not time to extend the detail of agricultural thrift, but there is one indispensable particular, without which no farmer can thrive as he ought; without which, one most important department of his farm will be crippled and baggard; without which, if his purse grows full, his soul grows lean; without which, he will bring disgrace on agriculture, and Nature will be revenged on his unnatural state, in refusing Heaven's last, best gift to man, a loving, prudent, first-rate wife. His hired help may fail him, but he has this helpmeet for him that never fails—helping his hands, helping his head, helping his heart, and from being a mere farmer makes him a whole man. Helping his heart, I said—and this reminds me that the view we take of agriculture is too often confined to the mere question of dollars and cents.

"But it is a grievous pity if this God-given em-

ployment should be capable of nothing higher and better. The moral value of agriculture, its use in refining the sentiments and tastes, is, alas! almost universally ignored. With so much to improve the more spiritual part of our nature, how often do we see the farmer destitute of all sense of the beautiful, and despising all those improvements of nature which heighten her attractions and feed the soul with associations of loveliness, that, mingling with her toil, turn drudgery to delight, and add pleasure to profit. If the farm were made as tasteful as a pleasure-ground, and the dwelling adorned as a grotto, the farmer's toil would be compensated by cheerfulness; his weary body be beguiled by his pleasant mind, and above all, the children would not grow up to hate their father's employment, using their first freedom to try a precarious substitute, and leaving the hearth and homestead to the stranger and foreigner."

AGRICULTURAL PRODUCTS.

D. J. Browne, Esq., Superintendent of the Agricultural Division of the Patent Office, has prepared a table of the agricultural products of the United States for 1855, and affixes a valuation to the several products. However near he may approximate the amount, we think he has overshot the mark in the valuation. For instance, he values the whole crop of corn at 60 cents per bushel, while 40 cents would be a good price. Other items are as far wide of the mark. We publish the table showing the amounts, and leave our readers to figure out the value for themselves.

VEGETABLE PRODUCTS.

Indian Corn.....	600,000,000 bus.
Wheat.....	165,000,000 "
Rye.....	14,000,000 "
Barley.....	6,600,000 "
Oats.....	170,000,000 "
Buckwheat.....	10,000,000 "
Potatoes (all sorts).....	110,000,000 "
Flaxseed.....	58,000 "
Beans and peas.....	9,800,000 "
Clover and grass seed.....	1,000,000 "
Rice.....	250,000,000 lbs.
Sugar (cane).....	505,000,000 "
Sugar (maple).....	34,000,000 "
Molasses.....	14,000,000 gals.
Wine.....	2,500,000 "
Hops.....	8,500,000 lbs.
Tobacco.....	190,000,000 "
Cotton.....	1,700,000,000 "
Hemp.....	24,500 "
Flax.....	80,000 "
Hay and fodder.....	16,900,000 tons.

DOMESTIC ANIMALS AND ANIMAL PRODUCTS.

Horned cattle.....	21,000,000 head.
Horses, asses and mules.....	5,100,000 "
Sheep.....	28,500,000 "
Swine.....	32,000,000 "
Butter and cheese.....	600,000,000 lbs.
Milk.....	1,000,000,000 gals.
Wool.....	60,000,000 lbs.
Beeswax and honey.....	16,000,000 "
Silk cocoons.....	8,000 "

It must not be imagined that though the country has produced so abundantly the last year, that the whole product will be realized. The loss by wastage, rotting, accidents, disease, &c., takes off a large percentage from this. The total estimated value of vegetable products, is \$1,355,887,500—animal products, &c., \$1,352,005,000.

GARDENING FOR THE SOUTH.—This is the title of a new work, setting forth the best method of cul-

tivating all the trees, vegetables and flowers common to good gardens, and flourishing in the southern States. It is well arranged, the descriptions are clear and practical, and it cannot fail to prove of essential service to the gardener of the South. The author says, that, with them, "gardening in all its departments is generally deemed the peculiar province of the ladies, and that if Mr. Downing had lived at the South, he would never have asked 'What is the reason American ladies do not love to work in their gardens?'" We are glad to learn this fact, and hope their Northern sisters will "make a note on't." The author has done his country a good service. By WILLIAM N. WHITE, of Athens, Ga. Published by Saxton & Co., N. Y., and for sale at Saxton's Agricultural Depot, 81 Washington St., Boston.

For the New England Farmer.

IMPROVING PASTURE LANDS.

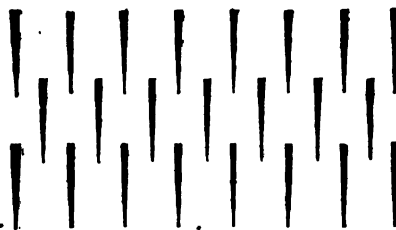
BY PROF. J. A. NASH.

A writer in the *Country Gentleman*, nameless and placeless, so far as the communication shows, has started a thought on the above subject, which has, at least the merit of novelty.

His remarks relate to side-hill lands, which are apparently underlaid by a crust or pan, preventing the water sinking, and causing it to flow laterally near the surface, and occasionally to ooze out at the surface after heavy rains. He describes these lands as producing a little fine, fuzzy grass, a few hard-hacks, and here and there a bunch of brakes, enough in all to "keep poorly," (he might almost have said to starve,) one cow to five acres. He thinks that lands bearing this description, are generally infested with poisonous ingredients, often some salt of iron; and that underdraining is the appropriate remedy; he suggests that the drainage water might, in many cases, be used for the purpose of irrigation; although it would issue from the ground full of poisonous matters, hurtful in their first effect to the grass to be flowed, yet that these poisonous matters are soon neutralized in the sun and air; and that the water, containing, as it would, other ingredients, favorable to vegetation, would be beneficial. He suggests the idea of running drains from the upper edge of the pasture, short distances, down the slope, making them deep at the upper end, but less so as you proceed downward, running out at the surface at the lower end; then commencing other drains, midway between the lower extremities of these, and then in like manner others, and so on to the lower side of the pasture, or the foot of the hill, as the case might be.

The drains, if his suggestions were tried, might be of pebble stones, if such were plenty, but otherwise of tiles, except at the lower ends, where they would be exposed to frost, and where some other material would need to be used. The process would not be necessarily expensive, as such drains could be excavated mostly by the plow, and the earth returned by the scraper. The suggestion would seem to be of some importance, as applied to such kind of land. But the writer adds, that, inasmuch as the benefit of draining some lands is yet but little appreciated in this country, and will

hardly be gone into by many, a tolerable substitute for draining might be found in subsoiling; that if we should commence on the upper border of such a pasture, and run furrows downward, short distances, say six rods, with the subsoil plow, making them deep at the upper end and shallower till they run out, placing them as in the marks below, the effect would be, on this side-hill land, at once to drain the soil, and to irrigate the lower portions of the pasture; and he supposes both would be beneficial, and that the operation would not be expensive, even if repeated every few years. The subsoil plow, it will be understood, would not break the turf, but only make a cut through it, stirring and loosening the subsoil below, so as to afford a passage for the water with whatever poisonous substances were dissolved in it, to the surface. He would have these cuts with the subsoil plow, some 10 or 12 feet apart, and arranged as below, the size of the line indicating the depth of the cut in different parts.



This last suggestion, about thus subsoiling some side hill pastures, could, of course, apply to but a small proportion of our pasture lands, because most of them are of a different character, but it may be important in relating to those to which it is applicable. I am aware that it will be objected, that subsoiling is useless, unless preceded by underdraining,—for it will be said that the gashes made by the subsoil plow fill up shortly, if the water be not first taken out. The objection is unanswerable so far as relates to flat lands; but would not these short cuts with the subsoil plow, down a side-hill, relieve the ground of water, first over the cut, and then laterally half-way to the next cuts? Perhaps it would be better if the cuts with the subsoil plow should be nearer each other, say half a rod apart, and not more than three or four rods in length. Will not some one who has cold, sour side-hill pasture, try the experiment when the spring opens, and at some future time report the result. It could be tried on a single acre. If the cuts were made eight feet from each other, and three rods in length, there would be on an acre about one hundred of the cuts, and their aggregate length would be three hundred rods. With a stout pair of cattle and a good driver, the work could be done in one hour; and although it would be but an experiment founded, it is confessed, upon *theory*, and on *theory* alone, yet there can scarcely be a doubt that the effect would be good,—it would be, to tap the land, to draw out the sour, poisonous water, to neutralize its hurtful solutions, or to change them into ingredients favorable to vegetation, and then to use the water so cured and improved by exposure to sun and air, for the purpose of irrigation.

The theory is—and the reader must judge of its soundness—that the water in such a side-hill, instead of sinking away into the earth, creeps along

down the slope, below the surface, and above an impervious stratum below, dissolving various hurtful ingredients, and becoming worse and worse, the further it goes; whereas, if you could cause it to flow alternately above and below the surface, it would become surcharged with those poisonous matters when below the surface, would deposit them where they would be neutralized, sink again, and again become charged with the same poisonous matters, and again deposit them, and so on, acting as a carrier, carrying out load after load of these poisonous matters, and depositing them where, under the influence of sun and air, they would undergo a change which would render them favorable, or at least, not hurtful, to vegetation.

ROOTS! ROOTS! ROOTS!

Farmers, cultivate more roots. Do not delay preparations for this important crop. You can soon increase your ability to feed double the amount of stock you now feed; this will double the manure, and the manure will double your future crops. An acre, with 20 loads of manure, and well cultivated, will give two tons of hay, as an average. Call it worth \$40; it will cost \$5 to harvest it. Another acre, with the same amount of manure, will give 800 bushels of carrots, as an average. Cost of cultivation, \$40. They are worth 25 cts. a bushel for stock, making \$200. Deduct cost of cultivation, \$40, and we have \$160 to offset against the \$35, value of the hay. This is one way—and a sure one—to increase the profits of the farm—let us try it!

INGENUITY OF BIRDS.

Thrushes feed very much on snails, looking for them in mossy banks. Having frequently observed some broken snail-shells near two projecting pebbles on a gravel walk, which had a hollow between them, I endeavored to discover the occasion of their being brought to that situation. At last, I saw a thrush fly to the spot with a snail-shell in his mouth, which he placed between the two stones, and hammered at it with his beak till he had broken it, and was then able to feed on its contents. The bird must have discovered that he could not apply his beak with sufficient force to break the shell when it was rolling about, and he therefore found out and made use of a spot which would keep the shell in one position. When the lapwing wants to procure food, it seeks for a worm's cast, and stamps the ground by the side of it with its feet, somewhat in the same manner as I have often done when a boy, in order to procure worms for fishing. After doing this for a short time, the bird waits for the issue of the worm from its hole, who alarmed at the shaking of the ground, endeavors to make its escape, when it is immediately seized, and becomes the prey of the ingenious bird. The lapwing also frequents the haunts of moles. These animals, when in pursuit of worms, on which they feed, frighten them, and the worm in attempting to escape, comes to the surface of the ground, where it is seized by the lapwing. The same mode of alarming his prey has been related of the gull.—*The Cincinnati.*

For the New England Farmer.

SOMETHING ABOUT TREES AND HEDGES.

MR. EDITOR:—There seems to be a growing conviction among all classes of men who have bestowed any attention upon the subject, that some other method of enclosing fields besides those in general use must ere long be adopted, and that the hedge is to form an important part of this substitution.

Many experiments which have been tried with trees and shrubs of foreign growth, have for various reasons partly or wholly failed; but in this, as in most other new things, a want of knowledge combined with a want of patience, deserves the credit of frustrating a large share of these enterprises. To me, it seems highly important that our State and County Societies should take up and investigate the matter, so far, at least, as may be necessary in order to relieve individual enterprises of much of the embarrassment under which it now labors, and thus prepare the way by the diffusion of knowledge, for such changes in the art of fencing as necessity may demand. I am not aware that any of our societies have as yet taken this matter in hand.

Much may be done to relieve this growing want of our country, if those farmers who are beginning to regard it with apprehension, would now take the pains to sow a small patch, such as every farmer can easily spare, with the seeds of those trees which are known to be of rapid growth, and which when sufficiently matured, afford material for all the requisites of the farm. This need not, under ordinary circumstances be regarded as a mere experiment; the economy of such an attempt has been too thoroughly tested, and your readers have become too well acquainted with the results to doubt its practicability.

Much has been said in your valuable paper which is calculated to attach interest to the subject, and I hope that those who have made successful experiments will continue to afford us the light of their example. I would like to call the attention of your readers, at this time, to the Tenth Legislative Agricultural Meeting of last year, as reported in your monthly journal, page 194. There was much said at that meeting that is pertinent to our subject.

Can you tell us, Mr. Editor, what kind of English oak Mr. Fay referred to on page 194? I would like also to know the price of acorns from the English oak. I will mention but one other tree referred to in that report, at present, for I can not take a ramble through the woods now, and that is the Scotch larch. This is used, as I am informed, considerably in England for hedges, especially to fence against cattle. Its very rapid growth, even on poor, worn-out land, together with its adaptation to various uses as an almost indestructible material, would doubtless render it an important acquisition for general use. Are these trees sufficiently hardy to endure the extremes of our climate? Most trees of rapid growth are liable to injury from frost, especially when young. Again, who has got any of the larch to sell? If they can be imported, as Mr. Fay says they can, I should like a thousand or two of them. C. BLAKELEY.

Bristol, Ct., May, 1856.

REMARKS.—MR. FAY will oblige more than our correspondent by answering his inquiries.

CARBON.—Carbon constitutes about one-half of the organic combustible parts of plants and vegetables. The remainder of the organic matter is oxygen, hydrogen and nitrogen, which become solid in vegetation.

BOYS' DEPARTMENT.

BROTHERS QUARRELING.

A SCOTCH NURSERY BALLAD.

DAVID.

"Father, settle Sandy!
He's making mou's at me;
He's aye plague, plaguing,
And winna let me be;
And snye he looks so simple like
Whene'er he thinks he's seen,
But just as soon's you're out of sight,
He's making mou's again.

"Father, settle Sandy!
He's crying names to me,
He's aye tig, tiggung,
And winna let me be;
But O, see sly, he hauds his tongue
Whene'er he kens ye're near,
And says't again below his breath,
That none but he can hear."

SANDY.

"Father, settle Davie!
It's him that winna agree,
He's aye jeer, jeering,
And lays the blame on me;
I daurna speak, I daurna look,
I daurna move a limb,
For, if I gi'e a wee bit laugh,
He says I laugh at him."

FATHER.

"O, learn to be loving, and kindly agree,
At home all as happy as brothers should be,
Ere distance may part you or death may divide,
And leave you to sigh o'er a lonely fireside.

"The sweet look of kindness, the peace-speaking tongue,
So pleasant and lovely in old or in young,
Will win the affections of all that you see,
And make you still dearer to mother and me.

"But, O! if divided by distance or death,
How sore it would grieve you, till life's latest breath,
That anger or discord should ever have been,
Or aught but affection two brothers between!"

CHILDREN MUST DO IT THEMSELVES.

If I were to reduce to a single maxim the concentrated wisdom of the world, on the subject of practical education, I should but enunciate a proposition, which I think will command your assent, but which I fear, is not incorporated as it should be, into the practice of schools and families. That principle is, that in educating the young, you serve them most effectually, not by what you do for them, but by what you teach them to do themselves. This is the secret of all educational development. We talk of self-education as if it were an anomaly. (In one sense of the word, all education is obtained simply by the exertion of our own minds. And is this self-education? What does education mean? Not induction.

The popular opinion seems to be that education is putting something *into* the mind of a child by

exercising merely its power of receptivity—its memory. I say nay, nay, NAY. The great principle on which a child should be educated, is not that of reception, but rather that of action, and it will ever remain uneducated, in the highest sense, so long as its higher mental powers remain inert. One may lead a horse to water, but twenty cannot make him drink—and yet if he does not drink, he dies. So a boy or girl may be supplied with all the materials of education, and yet remain uneducated to the end of time. Moses struck the rock, and the waters gushed forth. When it is proposed to apply a force to inorganic matter, the force not being within itself, must be applied externally, or it must change its internal constitution like chemical action. But when we pass to the living soul, we find the organizing, energizing force within, and all our skill must be directed to the development of this, of a true moral and spiritual life.—A. POTTER, D.D., in *Conn. School Journal*.

LADIES' DEPARTMENT.

DOMESTIC RECIPES.

GINGER BEER.—Two gallons of ginger beer may be made as follows: Put two gallons of cold water into a pot upon the fire; add to it two ounces of good ginger bruised, and two pounds of white or brown sugar. Let all this come to the boil, and continue boiling for half an hour. Then skim the liquor, and pour it into a jar or tub, along with one sliced lemon, and half an ounce of cream of tartar. When nearly cold, put in a teacupful of yeast to cause the liquor to work. The beer is now made; and after it has worked for two days, strain it and bottle it for use. Tie the corks down firmly.

MOULDINESS.—Fruit jellies may be preserved from mouldiness, by covering the surface one-fourth of an inch deep with finely pulverized loaf sugar. Thus protected, they will keep in good condition for years.

RICE CAKES.—Boil rice until it is soft, and while warm make it into cakes or flat balls. Dip these balls into a beaten egg, and then roll them into Indian meal till thoroughly coated. This done, fry them in lard, which is better than butter for this purpose. Serve them with sauce, or with butter or cream and sugar.

A GOOD WAY OF COOKING ONIONS.—It is a good plan to boil onions in milk and water; it diminishes the strong taste of that vegetable. It is an excellent way of serving up onions, to chop them after they are boiled, and put them in a stew-pan, with a little milk, butter, salt and pepper, and let them stew about fifteen minutes. This gives them a fine flavor, and they can be served up very hot.

WASHING SILVER WARE.—It seems that housekeepers who wash their silver ware with soap and water, as the common practice is, do not know what they are about. The proprietor of one of the oldest silver establishments in the city of Philadelphia, says that "housekeepers ruin their silver by washing it in soap suds; it makes it look like pewter. Never put a particle of soap about your silver; then it will retain its original lustre. When it wants polish take a piece of soft leather and whiting, and rub it hard."



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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JOEL NOURSE, PROPRIETOR,
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

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GRASS—HAYING—HAY.



JULY is the month when the principal portion of the hay crop in New England is secured. It is our staple crop—the one by which we mainly increase the fertility of our farms, and having a greater money value than any single crop produced at the South;—either their cotton, tobacco or corn crop is insignificant, compared with it; and New England, rocky and sterile as much of it is, and whose soil is contemned by those

living on easier and richer lands, produces a surplus for those who possess every facility for raising it, if they had industry and knew how.

Much of our best land for this crop still lies waste; it is in meadow and swamp that need either thorough reclaiming, or if partially reclaimed, draining and deep plowing. When such lands are once well set in grass, they will produce profitable crops for many successive years, with little annual expense. Another kind of excellent grass land is of granite formation, at a higher level than the meadow, but still having land abounding in springs above it. These lands are a heavy loam, quite often a clayey loam, and generally pretty rocky. It is sometimes as expensive to reclaim these, as it is the swamp, but when once swarded and fed annually with a moderate dressing of compost, they will produce from two to three tons of excellent herbage—grass and red-top, for a dozen years in succession.

Such, mainly, are the lands which should be devoted to grass.

The importance of this crop would justify the farmer in making a good many experiments, and in devoting considerable time to an investigation of it in all its bearings. We believe there is no crop that is commonly cultivated, in which so much loss is suffered as in the hay crop. After a selection and proper preparation of suitable lands, and seedling and growing the crop, the first error usually committed is in the

THE TIME OF CUTTING.

Professor Martyn says, "grasses are Nature's care." We wish they were more frequently the care of man. We are well aware of the variety of opinions entertained as to the proper time of cutting, and of the difficulty of not being able to secure the whole crop at the precisely appropriate time; still there is a carelessness or indifference existing, which results in serious loss. The farmer must remember that it is not so much the *bulk of hay* on his scaffolds, that is to afford nutriment to his cattle and take them through the winter in good flesh and health, as it is that the hay is secured with all its natural juices which it is possible to preserve.

In order to secure this it must first be cut at the right time. If cut too soon, before the sap is fairly elaborated into nutritive properties, such as sugar, mucilage, albumen, &c., it shrinks immensely, and when dry has but little bulk or nutriment. On the other hand, if left too long, the plant expends its energies upon the seed in accordance with the natural law to perpetuate its kind. The seeds ripen, and fall to the ground and are lost, while the stem and leaves are little better than oat or barley straw.

But if the favorable moment can be improved to cut the grass just as its blossoms begin to fall, when the seed has formed, but is not perfected, then we secure all its nutritive properties if the

GRASS IS PROPERLY CURED.

The object in making good hay, says Low, is to prepare it as quickly as possible, and with as little exposure to the weather, and as little waste of the natural juices, as circumstances will allow. When we are enabled to do this the hay will be sweet, fragrant, and of a greenish color. We still do much of our farm work under the English notions which came here with our ancestors, without taking into account the great difference in the climate of the two countries. There, they employ *four* days in curing the herd's grass, which is often admirably done under our July suns in a single day! Many farmers do not consider the effect of these cloudless suns, and the consequence is that they dry their hay until its juices are evaporated, and a large proportion of its value lost. One cloudless July day, with a slight breeze, is sufficient to cure hay cut in the morning or the previous evening, where there is not more than thirty hundred to the acre. In such a case the swaths should be evenly spread, and it will be necessary to stir it quite often, and lay it up as lightly as possible from the ground.

A general rule should be enforced that no hay be left in swath or winrow over night, unless it be that cut just before or after sundown. There are two advantages in its being cocked: it prevents the injurious effects of dew or rain, while the slight heating process which is going on causes an exhalation which is retained in the cock, and gives the hay a most fragrant odor. In *good weather*, two days, at most, are sufficient to secure hay, even when heavy crops are cut. The cocks should not be opened on the second day until the dew has gone, and then only opened in thick masses. After lying in this manner until noon they are ready to be carted to the barn.

Clover requires a very different process. It should be cut close to the ground, and allowed to remain until the afternoon of a bright day, in the swath; then they should be carefully turned upside down with a fork, and left over night. After dinner on the following day, the swaths should be taken up with the fork and laid in a cock—not rolled or pushed up—and then these cocks may remain two nights. After that, on a clear morning, they may be turned over to admit the sun and air for a few hours, when they will be ready to go in, with their leaves all on, and as sweet and fragrant as a nose-gay. A load of brush is worth about as much for cattle as a load of clover, cured as it is often done. Allen, in his "Farm Book," says there is a loss of nutritive matter in the ordinary mode of curing hay, which is obvious to every careful feeder. This is conspicuously evident, in the diminished quantity of milk yielded by cows, when taken from the pasture and put upon the hay made from grass similar to that before consumed. There is undoubtedly a combination of causes to which this may be

imputed, but the bad condition of the hay is often a prominent one.

SALTING HAY.

This is now, we believe, extensively practiced, and, judiciously done, we have no doubt it is well. Those who are in the habit of placing salt before cattle, know that during the winter season they will take but little. A cow consuming a ton of hay in the cold months, we are confident would not voluntarily consume two quarts of salt—and yet many farmers are in the habit of applying *eight quarts* to a ton! This is probably the source of many of the recent diseases among cattle. It leads, also, to the slovenly practice of getting in the hay in a damp or partially cured state, under the idea that the salt will preserve all its virtues.

The whole subject of hay-making needs more consideration. Several things are suggested which must be left for another talk.

DUCKS IN CHINA.

It is well-known that a considerable portion of the inhabitants of China dwell in floating houses, or rather in boats, with large and convenient cabins, where men, women and children may be seen in abundance, having no other home, and gaining a slender livelihood by some occupation that does not require a residence on *terra firma*. In the neighborhood of Canton, many of the owners of these movable dwellings employ themselves in rearing ducks; and the sagacity which these animals exhibit is remarkable. Every morning they are allowed to leave their habitation, and indulge in their aquatic amusements; and sometimes five or six hundred of these noisy creatures are seen sporting on the waters near one of these floating duck pens. They never stray far from their homes—and the sound of a little tinkling bell seems to produce upon them a magical effect. The moment the first sound of the bell is heard, the ducks hasten towards their home with astonishing swiftness, and the commotion thus instantaneously produced in their rank, is amusing enough, each one being apparently anxious to outstrip his companions in the race—and such a scene of shoving, swimming, flying and gabbling is seldom seen among ducks in any other part of the world than in China. This prompt obedience on the part of these stupid water fowl, is the result of education; and the means used, although exceedingly efficient, are very simple. The last duck which reaches the boat is invariably seized by the duck-master-general, and is compelled to undergo a severe drubbing with a bamboo cane—and the fear of this punishment, which they are exceedingly desirous to avoid, ensures the most perfect order and obedience among these animals.

This mode of managing ducks is somewhat similar to that just and humane expedient resorted to on board of some of the English ships of war, and for aught we know, American also, to induce the men to hasten on deck with all possible despatch, when all hands are called to quarters, or for any other purpose. A boatswain's mate is stationed at the hatchway, and those who happen, through negligence, indolence or accident, to be at the lag end, are sure to get a severe "starting."—*Portfolio*.

For the New England Farmer.

LECTURES,

On the Relation of Trees to the Atmosphere and Climate, as affecting an equal Supply of Rain, through all the different Seasons—The Equalization of Moisture on the Surface of the Earth—The Salubrity of the Climate—The Fertility of the Soil.

The subscriber proposes to deliver two lectures, "*On Trees in Relation to the Earth and the Atmosphere*," as stated above, in which he will endeavor to establish the following points:—That

1. Trees are useful and indispensable agents in the economy of moisture for equalizing the humidity of the soil, and for promoting an equal supply of rain throughout the year; and their usefulness depends on their situation.

2. They pump up moisture by their roots from beneath the surface, and exhale it into the atmosphere; and they arrest the floating vapors of the atmosphere and shed them upon the soil. Hence they keep both the soil and the atmosphere in a moister state than they would preserve without them.

3. They loosen the soil to a great depth by means of their roots, and thus open it to the chemical influences of the atmosphere.

4. They act as conductors of the electric fluids of passing clouds, and cause them to discharge their rain upon the earth; but their usefulness in this respect, depends on their elevation.

5. Were the earth entirely stripped of trees, our wet and our dry seasons would be periodical, and dependent entirely on meteorological changes; droughts, especially in summer, would be excessive.

6. Were the earth entirely covered with trees, the moisture both of the soil and the atmosphere would be excessive, and all the lowlands would be lakes or morasses.

7. Were the continent deprived of its forests in tracts, some of a hundred miles square being destitute of trees, while others of equal extent were densely wooded, the country would be liable to squalls, whirlwinds, and other convulsions of the atmosphere.

8. Were the hills all laid bare of trees, and turned into arable land, while all the vales and lowlands were covered with forest, the trees would be in no respect serviceable to agriculture, answering the purpose, neither of protection nor fertilization. They would receive all their washings from the hills, but they would impart nothing to them in return; all their foliage would droop and decay at their own roots.

9. Were the hills covered with trees, and the vales and the lowlands converted into arable lands,—that is, were the highest points of the country's surface covered with trees, and the lowest points devoted to tillage—the arrangement would be such as to secure the greatest advantage, from their influence. Under these circumstances (were they universal) there would be comparatively but little drought; the trees would answer for protection in the best possible manner, and all their foliage would contribute to fertilize the plains and valleys below them.

10. Trees in elevations temper the severity of cold in winter, and of heat in summer, and thereby equalize the climate; while in the valleys and lowlands they produce the opposite effect.

11. Trees on elevations break the violence of

the winds, and lessen the liability to storms and hurricanes, by preserving an equilibrium of heat and moisture on the surface of the earth, and by promoting an electric equilibrium in the atmosphere.

12. Trees growing in the lowlands serve to retain moisture where there is already an excess of it; on elevations they retain the moisture in places which would otherwise be dry and unproductive.

Those above enumerated are some of the points which the subscriber intends to establish; but they are only a few of the vast number of the services performed by trees for the benefit of man. He will show not only the general value and indispensable necessity of forests to climate, and to the purposes of agriculture, but he will also prove that their advantages depend on their situation, and that in some places they are positively injurious. He will point out the way in which they should be disposed, in order to produce the most beneficial influence upon climate and upon soil, how they may be made to keep dry places moist, barren places productive, and to secure the double purpose of irrigating and fertilizing the soil. All these points, and many others, he will establish by well authenticated facts, and by the testimonies of eminent travellers, naturalists and philosophers.

He will dwell particularly on the services of trees in their right situations, as electric and chemical agents, and show how, by the proper distribution of them, were the whole community to work in concert, our climate might be permanently improved. Our people are sufficiently intelligent and public-spirited, to act in concert for the judicious planting and clearing of forests, if it could be demonstrated to them, that there is indeed one way of clearing and planting which is useful, and another way of clearing and planting which is decidedly injurious to soil and climate. These points the subscriber believes he can successfully maintain. If he is mistaken in some of his views, the value of his attempt will not be diminished by a few errors of theory, if his efforts do but lead the public to give this subject their earnest attention. WILSON FLAGG.

Andover, Mass.

For the New England Farmer.

HOME-MADE GUANO.

Much as has been said and written upon this subject, there are still some who neglect this source of enriching the farm and garden, viz., the scrapings of the poultry-roost. I have used it for two years, and am fully convinced of its utility as a fertilizer. For all kinds of garden vegetables, I consider it excellent. Last season I used it in the hill on corn, but had not quite enough to go over my piece, and the result was, there was fully one-third more corn where it was applied than where it was not, though I put only a small handful to a hill.

It was prepared as follows:—One-half hen manure, one-half decomposed swamp muck, and one bushel of ashes to four of the mixture, put in the day it was used. The ashes should not be put in until it is to be used, as they will set free the ammonia and thereby cause a loss. In conclusion, save what you have at home, before going abroad after fertilizers; so says common sense.

Mechanic Falls, Me.

S. TENNEY

MASSACHUSETTS AGRICULTURE.

Before us, we have the "Third Annual Report of the Secretary of the Massachusetts Board of Agriculture, together with the Reports of the Committees appointed to visit the County Societies," and giving some account, also, of their condition. The volume opens with a list of the persons composing the State Board. The report of the Secretary follows, and presents a statement of the management of the farm at Westboro' during the past year, together with tables showing the amount of food and milk of cows for definite periods. The general improvements of the farm, the amount and kind of crops, and the experiments with manure, are given at some length, and are accompanied by such judicious remarks of the Secretary as seemed to be necessary to a clear understanding of these several topics. Considerable space is devoted to a description of certain farm implements, and with illustrations of them. Under this head the short essay on the structure of the plow, and the application of the draft, should be read with care by all who either direct, hold the plow, or drive. In this portion of the report we find several replies from men of experience, in various parts of the State, to inquiries of the Secretary, in relation to the practicability and expediency of using the mowing machine. The writers—we believe all of them—favor its use. Valuable remarks and suggestions upon these returns are made by the Secretary; and these, with the report of the committee appointed by the Massachusetts Society, who offered a premium of \$600 on a mowing machine, give such descriptions of their use as to enable one to form a pretty correct judgment of them as labor-saving machines for the farm.

The Secretary states that from the office of the Board he has distributed many thousand packages of seeds of different varieties, and that hereafter this will be made a more prominent object of attention. He also suggests that a regular system of exchange is highly desirable, by which plants, fruits, &c., which have been found to succeed in one section could be brought to notice in other sections. His remarks on this topic are pertinent and worthy of consideration, and with an excellent letter on the subject of the destruction of birds on our annual Fast day, which was sent into every part of the State, he closes his report to the Board.

The next division is the reports of committees from the Board, to visit the several county exhibitions. The plan is an excellent one, for several reasons. If the reports are impartial and faithful, they give a synopsis of all our exhibitions. They should never flatter, but commend what is worthy, and point out plainly what seems erroneous, or where obvious improvement may be made. Knowing that a person of experience and keen observa-

tion is to be present for the very purpose of noting merits or deficiencies, a society will make greater effort to call out the products of the county, and to have every department of the show properly arranged, and in order. These visits prompt a wholesome ambition, while they are, in themselves, or should be, a sort of review of the transactions of a particular society for the year. But as a general thing, they do not go far enough; while they tell us that a county has made great progress in the breeds of its cattle or horses, and in the aggregate of its grains and grasses, we want to know, also, what influence these operations have had upon the homes and hearts of the people; whether the advancement is strictly confined to the specific objects set down in the bill, or whether a better knowledge and practice of these specific things has awakened a general desire for improvement in whatever goes to make up the sum of human comfort and happiness. Is there a general better cultivation of the soil? Are the tables of the common farmer supplied with a greater variety, and a better quality of vegetables and fruits than they were ten or twenty years ago? Is farming now better understood as an art, and a science, by those who direct its operations? Are inquiries on foot, and investigation encouraged? Are women interested and contented in the occupation? These, and many other inquiries, should be suggested to the delegate by the scene which he visits, and the influence of these operations upon the condition of the people should be made known to the Board; and in order to accomplish this, the delegate should pass two or three days among the people, whose exhibition he visits. We have read all these reports with some care, and have been gratified in the occupation.

The next general subject is on *agricultural statistics*; this we shall pass over now, and bye-and-bye give a page or two in full. They will be found of great value and importance.

The returns of societies, analysis of crops, meteorological observations, &c., the reader must examine for himself.

The abstract of returns of the county societies presents a mass of valuable and highly interesting matter. It has been clipt of its redundancies by the Secretary, and presented to the reader in a terse, compact, and vigorous form, and occasionally accompanied by suggestions or remarks from his own pen. These abstracts alone would make a volume of permanent and practical value. Some of the reports on neat stock, on fruits and flowers, and on domestic manufactures, are admirable.

One hundred and twenty-nine pages are then occupied by extracts from addresses delivered before the various agricultural societies of the State during the last year, and they contain an amount of suggestion, varied information and practical good

sense, such as have been rarely brought into so small compass before.

The volume closes with a carefully prepared Index, and is a credit to the printer, to the Secretary, who has moulded and brought it into shape, to the Board of Agriculture, who has furnished materials and general direction, and to the State, whose munificence and fostering care have produced such happy results.

It is handsomely illustrated with fine engravings of cattle, swine, poultry, machines and implements, and we do not hesitate to say, is a model volume for our sister States.

MEN ON THE PACIFIC.

An Englishman who has resided several years in Wisconsin, and since in Washington Territory, says in the *Country Gentleman*, of England, the Atlantic Coast and the Pacific Coast:—

1. In the first, a man is of ruddy complexion and full flesh; in the second, sallow and spare; in the third, about like the first. In the first, when in health, labor never tires him, and food and rest can be foregone for a while with considerable indifference; in the second, labor tires, and food and rest are found to be necessary at the usual times; in the third, it nearly resembles the first. In the first, he desires substantial food; in the second, knick-knacks; in the third an equal number of each.

2. Feminine beauty, in the first, consists mostly in a very soft and delicate skin and radiant color. In the second, a finely formed countenance, and finely proportioned, easy and graceful body. In the third, a union of the two, and therefore excelling both the others; and as Circassia is the apex of beauty in the old world, so is this destined to become in the new.

3. In the first, the prevalent diseases are generally of the chronic or lingering class, and appear to arise chiefly from the want of tenseness of fibre, and inaction of the secretions and excretions and secretions; they are mostly, scurvy, scrofula, swellings, rheumatism, hypochondria, dropsy, flatulent cholera, gravel, consumption, and putrid fever. In the second, including the South so far as before mentioned, bilious fever, dysentery, flux, diabetes, dropsy, inflammations and congestions of the liver, lungs, and brain, and the "tarnal" ague. In the third, we claim almost an exemption from all the above, and it is hard to say if any disease prevails. In a locality or two, on the Willamette in Oregon and Columbia river bottoms, the ague has prevailed to some extent, but elsewhere there appears to have been no prevailing sickness, with the exception of now and then coughs and colds. In the first, a man dies of slow and lingering sickness; in the second, of acute and violent disorders; in the third, by accident, violence, intemperance, or real old age.

5. In England, a working man is a *drudge*, but his hours of labor are moderate; in the States, he toils through too many hours in a day; in this country, he merely does enough.

6. In the first, a poor man continues such of necessity; in the second, through sickness; in the third, he cannot remain so.

7. In the first, he never makes a start; in the second, starts easily; in the third, with privations. The reason of the last is that the necessities of life are high in price, and those who have wealth are too lazy to hire much for the sake of increasing it.

For the New England Farmer.

LARGE AND SMALL POTATOES.

FRIEND BROWN:—As "planting time" is at hand, allow me to revive the old theme which has brought into your sheet statements from so many good, practical farmers.

Opinions, antagonistic, you have published at length. I have carefully read them up, and it is clear to my mind that large potatoes should have the preference over small ones for planting. Yet to many, it is not a well settled fact or a well settled principle, that small potatoes will not produce as abundantly as large ones, but it is positively contrary to all farm practice in planting all kinds of seed.

What would induce the farmer to riddle out his smallest grains, or shell off the tops of his ears of corn, for seed? Are not the cases exactly parallel? If we believe "as a man soweth so shall he reap," or, in the maxim of putting "good seed in good ground," our anxious hope is strengthened in the coming harvest.

Now my farming friends, I propose a plan which will add but little to your labor, and may do much for posterity.

1st. Of all long varieties of potatoes, cut off the cluster of small eyes, called the seed end; then cut the potatoes in quarters, lengthwise, and plant two feet apart; three to five stalks in a hill will produce more weight than a dozen or more.

2d. For the next row, leave on the seed end, and cut in quarters; plant two feet apart.

3d. Try the same experiment with the medium size in the third row.

4th. The same, with sizes from a Seckel pear to a hen's egg for the fourth row, or make two sizes of what is called small ones and plant in separate rows.

5th. That each row shall be planted with the same weight, which is the only fair test in seeding.

I shall look for the first row to produce as many pounds as the second, with less small ones; and as to the third and fourth row, I shall reckon on a large decline of size and weight.

Formerly it was said, "potatoes hardly pay for raising,"—but lately, a bag of money is needed to supply one's family with them. Careless cultivation is now unprofitable, perhaps disreputable. Certainly the farmer has no cause of complaint as to prices of his products. We look upon him as the great almoner, distributing the work of his hands to a hungry, starving, ungrateful people. We wish him God speed, and while skill has marked the age in the improvement of machinery and the arts, every implement in husbandry has kept pace with them; sensibly have his burdens been lightened by these ingenious and well timed discoveries. May we look for a good list of potato reports next autumn.

H. POOR.

New York, May, 1856.

REMARKS.—We do not fully agree with friend Poor. The potato is not the seed. We cut a

minute slip of horse radish and plant it, but it produces as large a root as though we had planted a piece weighing a pound, and so with many other plants. We have experimented with potatoes for several years, but have not been able to see any sort of difference in the product between planting large or small ones. But let us have the experiments he suggests, by all means.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 13.

MIDLAND COUNTIES.

BUCKINGHAM, BERKSHIRE, OXFORD, WILTSHIRE, WARWICK, WORCESTER, RUTLAND, LEICESTER, STAFFORDSHIRE, NOTTINGHAM, DERBYSHIRE.

Pursuing our agricultural tour, we arrive at the central counties of England.

Buckinghamshire, directly west of London, has an area of 470,000 acres, with a population of only 160,000, which, in England, indicates a county exclusively agricultural. The lands of this county are about equally divided among the various crops, the farms are of all sizes, large, small and middling, the extent of hill and level is about the same, and strong and light soils divide the county between them. The valley of Aylesbury is reckoned one of the most fertile in the kingdom. Its pastures are devoted to the fattening of sheep and oxen and the feeding of milch cows in the proportion of about one-third of each of these kinds of stock. There is no remarkable feature in the agricultural condition of the county.

Berkshire adjoins Surrey higher up the Thames. Its soil is sandy and poor in the east, as in Surrey, and in this part are Windsor Forest and tracts of uncultivated heath; the rest of the county is composed of calcareous hills or downs, and of a valley famed for its fertility, called the White Horse Vale, from one of its chalk hills having been cut in the form of a horse. The chief occupation of the valley is the making of cheese. The chalk hills pasture sheep similar to the Southdown. The fattening of pigs is carried on to a great extent near Farringdon, the breed being the well known Berkshire.

The most celebrated farm in Berkshire is that of Mr. Pusey, President of the Royal Agricultural Society. The farm consists of 377 acres, well managed in all its branches. But the most striking thing is the breeding and fattening of sheep. The flock consists of 800 head, half of which are breeding ewes. In winter, they are fed with roots, and during summer on irrigated meadows. Mr. Pusey proposes to feed, during the five summer months, 75 fine Southdowns upon two acres of these irrigated meadows. The sheep are put on the meadows in pens, and as the grass is eaten down, the pens are shifted. Before putting the sheep on, the water is stopped off, and let on again, when they are removed. Mr. Pusey asserts that, fed in this way, and finished off on corn and oil-cake, in sheds, they are fattened, at a year old, and sold at a high price to the butchers. All acknowledge that Mr. Pusey has succeeded in fattening four times the usual number of sheep, and doubling the produce of wheat on his farm. But Mr. Pusey's farming is high farming, and the general opinion is that he does not realize a profit from it. High

farming is well for those who can afford to lose money, and, by its experiments, may suggest methods, by which economical observers can obtain successful results.

Oxford is an epitome of the soil and agriculture of all England.

Wiltshire is divided into two very distinct parts, north and south. The northern portion, consisting of verdant valleys, through which flow the tributaries of the Avon, is a country of grass and dairies. The southern, composed of extensive calcareous downs, like Dorset, is a region of wheat and sheep. Here we have the famous Salisbury Plain. In the south large farming prevails, and Salisbury Plain presents to the eye the appearance of a deserted country, where a few farms, at great distances from each other, are hid from view, in hollows; and where fields of wheat, without a tree or fence, extend as far as the eye can reach. It would appear that an excessive and mistaken application of large farming has been here practiced. In no part of England are wages lower or poverty more rife.—The farms are too large for the capital employed on them, and not suited to wheat, the favorite end of large farming. The size of a farm is to be fixed by a sound discretion, taking many things into view; but it should not be disproportioned to the capital employed on it. This is an axiom in agriculture. There is a limit to everything. Large farming is well, when it diminishes the expenses of production; useless, when it increases them. That system of farming is best, which pays the best wages and the best profit, and provides most equally for the largest number from the returns of the land.

We observe quite another state of things in the midland counties of Warwick, Worcester, Rutland, Leicester and Stafford. Situated between the grass county of the West and four-course system of the east, this district presents a happy combination of both systems; it is the richest farming district in England. Beginning with Warwickshire, we at once see the chief cause of its great rural prosperity. The parts of the county which have hitherto fallen under our observation, have been exclusively agricultural, with outlets and markets, no doubt, from their proximity to London; but the great stimulus of manufactures, within the counties themselves, has been entirely wanting. In Warwickshire, Birmingham, with its dependencies, a great manufacturing district, presents itself. The population of the county is one to the acre, and four-fifths of the population are engaged in manufacturing; whence it follows, that an acre is required to produce food sufficient for one person, and that a farmer, who brings his produce to market, finds four consumers to bid for it, and these consumers all in the receipt of high wages, which enable them to pay good prices. How is it possible that agriculture should not prosper, under such circumstances?

It must not be supposed, that the soil of Warwickshire is good throughout. All the northern part of the county was, at one time, an immense moor, covered with wood and heather; now half the land is under grass, the remainder arable, and cultivated, generally, upon the Norfolk system.—Nor must it be supposed that the system of large farming prevails; the average of farms is 150 acres, and the majority under this size, in all the manufacturing counties, a circumstance which is most satisfactory to an American, as this division of farms

provides for a larger number more equally. Besides, the gross produce is greater on smaller farms than on large, when they are not deficient in capital and skill, as is shown in these counties. A tour through this smiling county is very pleasant; for there are no lands in the world so well dressed by the hand of man. Kenilworth and Warwick, with their historical associations and the delightful banks of the Avon, are additional attractions to such an excursion.

What I have remarked in respect to Warwickshire applies equally to the neighboring counties of Worcester and Leicester. The valley of the Avon runs into Worcestershire, carrying along with it the same beauty and fruitfulness. Leicestershire is perhaps richer still. This county is famous for the Stilton cheese and for the farm of Dishley Grange, once occupied by Bakewell, from whence emanated the great principle of the transformation in breeds of domestic animals, one of the most valuable conquests of human genius.

Staffordshire affords, probably, one of the most striking examples, in England, of the influence which the vicinity of manufactures exercises on agriculture. This county is not naturally fertile, and mountains, barren and wild, run through it. Owing to the extraordinary progress manufactures are every day making, the population of the county exceeds 600,000 upon an area of 730,000 acres. With such a mass of population the land must be stubborn indeed, which cannot be forced to produce. The potteries and iron foundries produce the immense wealth, which re-acts on agriculture. Large property predominates in Staffordshire, as in all counties, not naturally fertile.

Averse as we are to the relation of landlord and tenant in the United States, one cannot but admire the confidence and kindly relation which exists between landlord and tenant, in England. From generation to generation tenants hold their lands in their own families, under leases that run from year to year, and make great outlays on the lands, and generally refuse a longer lease, when offered to them. In this county, is Drayton Manor, a few years since the residence of Sir Robert Peel. When he carried the repeal of the corn-laws, he caused all his lands to be drained, at his own expense, upon condition that the tenants paid him four per cent. on the outlay, which terms they accepted; and then revised their rents, reducing all such as were not moderate enough, which were few, and offered his farmers long leases. These they refused, preferring the yearly tenantry, under which they had held their lands for generations, in their families. These estates of Sir Robert are the model of good management. The excellent state of the roads and buildings, the levellings and drainage, the good cottages with gardens for the laborers, the most improved implements, the most productive methods, everywhere the best crops and the best cattle, all speak not only of a high state of agriculture, but of a fortune used by the proprietor, as entrusted to his care, to bring forth fruit, under his hands, for the greatest good of the community.

Nottinghamshire is a hilly country bordering on the mountainous. In former times Sherwood Forest covered the greater part of these hills. It was the region of Robin Hood and his exploits. Owing to the sterility and barrenness of the soil, it has continued in the possession of a few noblemen, who, for their own enjoyment, have laid it out in fine

parks and extensive estates. The district now goes by the name of the Dukeny, from the number of ducal residences it contains. There is not much to interest the agricultural student; though there are some extensive and very expensive systems of irrigation to be seen in the county, and nurseries and plantations of all kinds of trees. In parts where attempts to improve the land have not been attended with success, some noblemen have set about planting regular forests. And it will be ascertained how far these forests, sown and planted by man, composed of selected trees, freed from all parasitical vegetation, carefully thinned, will be superior to those natural forests, which have grown up of themselves.

Derbyshire is one of the most picturesque counties of England, and is visited by crowds during the summer. Chatsworth, the magnificent residence of the Duke of Devonshire, is in this county, which everybody has heard of, and which is thrown open to the public with great liberality. One is struck, in its gardens and magnificent park, that, at the owner's expense, it is kept up more for the enjoyment of the public than his own; and that the time will come when no private fortune can stand such expense. The county is mountainous and much devoted to pasture, the rearing of cattle and the making of cheese. M.

For the New England Farmer.

WHITEWASHING ROOFS.

Having read the inquiries of a correspondent, and the remarks of the editor upon the subject, I offer to "show mine opinion."

Within two years I have resingled two barns, and several sheds and out-buildings, and have used for the purpose both hemlock and chestnut half-inch boards, cut two feet in length, and laid eleven inches to the weather, unseasoned and fastened with sixpenny nails. Instead of laying by line, I use straight-edged boards, eleven inches wide, and extending the length of the roof. These are kept in place by means of a quarter-inch bit and 40d spikes, two to each board, and the holes are afterwards plugged. With a broom and thick whitewash, in which salt forms an important ingredient, that part of the shingle which lies above the board is saturated. This course is followed with each successive layer of shingles, until the roof is completed, when the whole surface should be brushed over, beginning at the top. If the above method is adopted there is no danger of the evil consequences which attend painted roofs. I see not why the same method will not be of equal advantage where the ordinary shaved or sawed shingles are used.

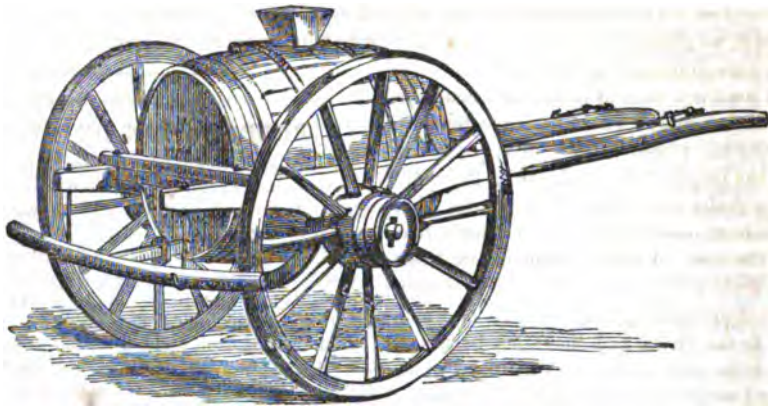
The advantages of whitewashing are—

1. It prevents checking.
2. It prevents the rot in the part which is not exposed to sight; and
3. It prevents the growth of moss on the surface.

I was led to adopt the use of whitewash for the above purpose, by hearing an old mason say, that "where lime mortar had fallen on the roof in topping out a chimney, he had found the shingles that had been thus spattered remaining sound when the rest of the roof was decayed." It is known that in England, timber that is to be exposed to the weather is first saturated in lime-vats.

PHINEAS FIELD.

East Charlemont, Feb., 1856.



A CART FOR DISTRIBUTING LIQUID MANURE.

For the New England Farmer.

LIQUID MANURE.

MR. EDITOR:—In answer to your Chicopee correspondent, in last week's *Farmer*, I can assure him that I generally find but little difficulty in making rational, thinking, practical farmers in this quarter of the country believe in the doctrine that the fertilizing properties of barn manure are often very much deteriorated, if not entirely destroyed, by exposure but for a few days to the influence of the intense heat and drying winds of this climate, when thinly spread in the common way as a top-dressing for grass lands; and that I have often seen cow manure, in particular, so much reduced in weight from exposure, that it was fit for fuel, and have repeatedly seen poor people in some parts of Europe using it for that purpose, in less than a week after it had been spread out to dry. Now if there can be any great amount of fertilizing matter remaining in it by the time it can be used as a substitute for wood, I should like your Chicopee farmer to inform me where it may be found. That the benefits to be derived to grass from top-dressing, with solid manures of any kind, depend entirely on the quantity of rain that may chance to fall unexpectedly after the dressing has been put on, is a fact established beyond a doubt, and is admitted by every intelligent farmer in this part of the country. And some of these thinking, practical farmers round these parts make from five to seven thousand dollars a year from the produce of their farms, after paying all necessary expenses; and to keep probabilities always in view when one writes—as he says—I would again inform him that with proper apparatus, and a fair field within a reasonable distance of the tank, I will undertake to manure effectually—for one dressing—from six to eight acres of grass land in a day, and not consider myself overtasked, although I have seen nearly sixty summers. If your Chicopee farmer had had faith as a grain of mustard seed in modern improvements, and but a

very limited knowledge of practical agriculture, he never could for a moment have doubted the practicability of such plain, simple, every-day operations as that to which he alludes. For his better information, however, on the subject of distributing liquid manure, and that of other farmers of the old school who read your interesting and valuable paper, I herewith send you a representation of *Croskill's Liquid Manure Cart*, in common use in Britain, and many parts of this country, which you may publish if you please, as it may have a better tendency to dispell doubt on the subject than anything I have time to add at present, being busy in planting operations. At a more convenient season, you may hear from me again concerning this matter. This distribution cart is made of boiler plate iron, and holds two hundred and fifty gallons. It is provided with a perforated partition, which adds to the strength, and prevents a sudden surge in passing over uneven ground. The improved spread board is adapted to watering broad-cast, either level or unlevel lands; and by a simple, mechanical contrivance, the liquid is regulated to spread equally on the surface, and has an apparatus for watering two rows of turnips, any required width. The iron rod is attached to the shaft, and fitted to a brass lever valve, and with this rod, the driver without stopping his horse, can instantly increase or decrease the liquid, as required to manure the land. The pump is fitted into a grooved recess at the end of the cart, and may easily be put in or taken out. Any length of hose may be added to suit convenience. This pump does not choke, even when the liquid is nearly as thick as puddle, which is a matter of considerable importance, although I have not time at present to give a full description of this wonderful machine; but the plate will explain for itself.

T. C.

Beverly, West Beach, May, 1856.

REMARKS.—Our attentive correspondent we trust will excuse us for presenting the reader with an en-

graving somewhat different from the one which he sent us. Although Croskill's Cart is undoubtedly a more perfect machine, it is too complicated and expensive for common use among our farmers of moderate means. While we preserve the engraving of it, therefore, for the inspection of those who desire to see it, we give an illustration of a sprinkler which is at once simple, cheap and efficient.

The cart itself is a mere skeleton, the shafts being about 14 feet long. They are connected by a fore and hind bar, placed at such distance as will just admit the length of the cask, while the width between the shafts is suited to the diameter of it. The axle is bent downward to nearly a semicircle, to receive the cask. A pair of common broad cart wheels are fitted to the axle. The cask is suspended on two straps of hoop-iron, the ends of which are bolted to the shafts, and the same bolts pass also through the ends of two lighter straps which pass over and secure the cask firmly in its place.—The funnel or hopper is usually fixed on the top of the cask over the bung-hole, or it may be inserted therein by an attached pipe. The distributor may be made of copper, or wood. The bore should be about two inches, not less, and the length about seven feet, and slightly bent with a uniform curvature. The distributor may be attached to the cask by means of a stem of the same material and bore as the main tube, and should enter the end of the cask close to the lower chine.

A stop-cock is frequently put upon the stem, as will be seen in figure 2, to regulate the discharge; but for the entire setting off or on of the supply, the stem opens into a small chamber inside the cask, which chamber is closed by a flap-valve heavily loaded. This valve, when closed, stops the discharge, and, when lifted, the fluid has a free passage to the distributor. The opening of the valve

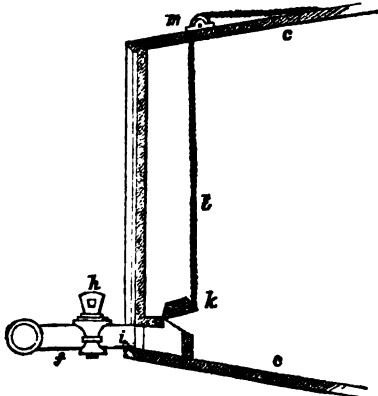


FIGURE 2.

is effected by a small chain attached to the flap, rising to the top of the cask, where it passes over a small roller, and onward to the fore-part of the cart on the right side, where it hangs at hand for

the carter to set off or on at pleasure. Figure 2 is a section of a part of the cask, and showing the chamber and valve; *f* is the stem of the distributor, *h* a stop-cock, *i* the chamber, and *k* the valve, which is the common leather flap or clack valve, well loaded with lead, *c c* is part of the cask, *l* the chain attached to the valve, and passing over the roller *m*.

For the New England Farmer.

PREPARATION OF MUCK.

MR. EDITOR:—Your correspondent, "D. T. A.," of Northfield, Vermont, inquires with regard to the proper preparation of muck with ashes, in order to be used as a manure. In replying to him, I would say that the quality of what is called *muck* differs so much in different localities, that no certain rule can be given. The quality of muck differs, materially, from the geological formations in the vicinity. The muck which is formed in that section of Vermont where the rock, in places, is a friable silicious lime-stone, (the calaneo mica slate of Adams,) and is formed over beds of shell marl, is of the best quality, especially if it is from four to ten feet thick above the marl. Mix with such muck two bushels of caustic ashes with a cord, and shovel it over till the ashes is well mixed with every part of the muck, and he will have a good manure for wheat, corn or potatoes, or for a top-dressing for grass. It is ready to be applied just as soon as it is properly mixed. Caustic lime is as good as caustic ashes for this purpose, bushels for bushel. There are other beds in the same geological formations, where no marl occurs. Such beds, if deep, and especially if found in the vicinity of rocks which contain sulphuret of iron, (iron pyrites,) may be nearly as valuable, but will require a greater proportion of lime or ashes, say three bushels to the cord. If there is not an excess of sulphuric acid, such muck will be as valuable as that found above marl, with this addition of ashes. If the muck has been thrown up and exposed to the air, say for a year, before using, a less quantity of ashes will answer.

The muck which is found where the rock is a talcose or chlorite slate, like that in Waterbury, the west part of Northfield, Waitsfield, &c., where the water is soft, is of much less value. When well saturated with the urine of cattle, having been placed in a barn cellar during the winter, or placed in the hog-pen, it is valuable. It is better, when possible, to be thrown out of the bed and exposed to the air for a year, before being put in the barn cellar, yard or hog-pen.

The muck found in those sections of Vermont where the rock is lime-stone and the water is hard, is a species of peat, the growth of a sphagnous plant, and differs from other muck, as much as the timber or other vegetation differs from that found in the talcose slate region. Any vegetable matter may be composted, and made valuable, by mixture with barn manures or alkalies. But the muck in the lime-stone regions is more easily prepared and of greater value than any other. I have a bed on my farm which answers a good purpose, without any preparation, especially for wheat and potatoes. But when prepared by mixing with ashes, at the rate of two bushels of ashes to a cord, it is better than any manure from my barn, and fully equal for corn to that from the hog-pen.

Brownington, Vt., 1856.

ORLEANS.

For the New England Farmer.

THE ADVANTAGE OF SIMPLE MACHINES.

What has become of the "Ladies' Department" in the *Monthly Farmer*? Have ladies ceased to write for it? Having always read that part of the *Farmer* with considerable interest, I have several times felt disappointed to find it so reduced, that one-half column of recipes is all each *Monthly* now affords for the farmers' wives. I have never seen any reason why there is not more improvement in the housewife's implements, unless it is because it is not more boldly advocated than it ever has been. Farmers are willing, in many cases, to avail themselves of every newly invented implement or machine that will render their labor easier, and, in many cases, work is executed a great deal better than it could be done in any other way. But how few supply their wives with one of the many improved churns, or butter-working machines. I am sorry to say, that in too many cases, this fault is in the wife, more than the husband, for I believe the generality of Yankees are willing to do all that is in their power to assist their *weaker*, if not *better* half. I have often thought, since living in New Hampshire, how much more labor the farmer's wife might perform in the same length of time, if she would only advocate her cause, and could have the right kind of utensils to work with.

As an example, I will describe the results of one evening's work by two families; one having implements, the other not. The work was sausage filling, in a very comfortable New England farmhouse, where out-doors had the stamp of improvement, but within the style of "old pod augur days" prevailed. Although the wife could have everything she wished for, without one murmuring word, yet she was willing to live and die in the same old track that her great-grand-parents had trodden, so that any improvement seemed like innovation.

It was late in the fall, when the evenings were long, that two pails full of sausage meat were brought into the kitchen, and set on a small table, with two brown earthen pans. Then each member of the family, five in number, gathered around it, prepared with a small piece of basket stuff, bent together in the form of a loop, and tied with a string; over this, they drew one end of the skin, and commenced putting the meat in with their fingers, which crowded in as much air as meat. In this way they worked the whole evening, and thought they did well to finish by nine o'clock. The other house was in Canada West, where men do not live up to the times in improvements. Their farms are generally large, and consequently the housewife's time is in greater demand. It was evening, and a large fire was on the hearth, near which stood two brass kettles, scoured almost bright enough to see one's face in, each holding about five pails full of sausage meat, ready for use. Presently, a pale woman entered, and a younger brother, who is the picture of health. The table was moved out from the wall, on which lay an instrument known as a *sausage stuffer*, and one of the kettles brought to the side of it. Near by, stood a pail of skins. The woman then drew a whole skin on the machine, turned it up, and the young man dipped in about two quarts of the meat, then placing the wooden part of the stuffer into the mouth of it, and pressing against it, the whole was forced into the skin.

The process was repeated, until all were filled. A child stood near with a darning needle to open any of the places that contained air. In this way, those two persons and child used up nine or ten pailfuls of sausage meat by nine o'clock.

Now if this little instrument diminishes labor, as this experiment shows, it also saves time. I do not think the cost of this simple machine is more than 75 cts.; but a much improved kind can be bought at the Quincy Hall Warehouse, Boston, which costs several dollars. I have not written this from any invidious motives. I would not be understood to say that there are no "sausage fillers" used in this section of the country, for I doubt not many a New England housewife *does* use one, and that she also adopts many improvements upon the old system. I have made these remarks merely to show the advantage of having proper utensils to work with. ONE THAT LOVES IMPROVEMENT.

REMARKS.—We like the suggestions of our fair correspondent, and hope to hear from her again. But the "Ladies' Department" is from "A to Ezzard," in the *Monthly Farmer*. We take it for granted that all our farmers' wives and daughters are strong-minded, intelligent, discriminating women, and that whatever is useful to them, they will select and "inwardly digest," no matter what head it may come under.

SLAVERY IN BRAZIL.

Trucks in every variety are now numerous. Some recent ones are as heavily built and ironed as brewers' drays, which they resemble, furnished with winches in front to raise heavy goods. Each is of itself sufficient for any animal below an elephant to draw; and yet loads varying from half a ton to a ton are dragged on them by negroes. Two strain at the shafts and one or two push behind, or, what is quite as common, walk by the wheels, and pull down the spokes. It is surprising how their naked feet and legs escape being crushed, the more so as those in front cannot prevent the wheels every now and then sinking into the gutters, and whirling the shafts violently one way or the other. One acts as a foreman, and the way he gives his orders is a caution to the timid. From a settled calm, he in a moment rages like a maniac, and seems ready to tear his associates to pieces.

A slave was chained to one heavy truck. He had been absent when it was wanted, and his enraged owner took this method of preventing him from losing another job. The links of the chain were three-quarter inch round iron.

Neither age nor sex is free from iron shackles. I met this morning a very handsome Mozambique girl with a double-pronged collar on; she could not have been over sixteen. And a few evenings ago, while standing on the balcony of a house in Custom-House Street, a little old negress, four-fifths naked, toddled past, in the middle of the street, with an enormous tub of swill on her head, and secured by a lock and chain to her neck. "Explain that, Mr. C—," I said. "O, she is going to empty slops on the beach, and being probably in the habit of visiting vendas, she is thus prevented, as the offensive vessel would not be admitted. Some slaves have been known to sell their barrels

for rum, and such are sent to the fountains and to the Praya accoutered as that old woman is."

With a friend I went to Consulado, a department of the Customs having charge over exports. Gangs of slaves came in continually, with coffee for shipment. Every bag is pierced, and a sample withdrawn while on the carrier's head, to determine the quality and duty. The tariff, based on the market price, is regulated every Saturday.

Every gang of coffee-carriers has a leader, who commonly shakes a rattle, to the music of which his associates behind him chant. The load weighing 160 lbs., rests on the head and shoulders, the body is inclined forward, and the pace is a trot, or half run. Most are stout and athletic, but a few are so small and so slightly made that one wonders how they manage to keep up with the rest. The average life of a coffee-carrier does not exceed ten years. In that time the work ruptures and kills them. They have so much a bag, and what they earn over the sum daily required by their owners they keep. Except four or five, whose sole dress was short canvass skirts without sleeves, all were naked from the waist upward, and from the knee below; a few had on nothing but a towel round the loins. Their rich chocolate skins shone in the sun. On returning, some kept up their previous chant, and ran as if enjoying the toil; others went more leisurely, and among them, some noble-looking fellows stepped with much natural grace.

A gang of fourteen slaves came past with enormously wide but shallow baskets on their heads. They were unloading a barge of sea-coal, and conveying it to a foundry or forge. The weight each bore appeared equal to that of a bag of coffee (160 lbs.) This mode of transporting coal has one advantage over ours, since the material is taken directly from the vessel to the place where it is consumed. As with the coal, so with every thing; when an article is once mounted on the head of a negro, it is only removed at the place where it is to remain.

A couple of slaves followed the coal-carriers, each perspiring under a pair of the largest sized blacksmith bellows—a load for a horse and cart, with us. A week ago I stood to observe eight oxen drag an ordinary wagon-load of building-stones for the Capuchins up the steep Castle hill; it was straining work for them to ascend a few rods at a time; to-day I noticed a similar load of stone discharged at the foot of the ascent, and borne up on negroes' heads.

No wonder that slaves shockingly crippled in their lower limbs, are so numerous. There waddled before me, in a manner distressing to behold, a man whose thighs and legs curved so far outward that his trunk was not over fifteen inches from the ground. It appeared sufficiently heavy, without the loaded basket on his head, to snap the osseous stem and drop between his feet. I observed another whose knees crossed each other, and his feet preternaturally apart, as if superincumbent loads had pushed his knees in instead of out. The lamplighter of the Cattete district exhibits another variety. His body is settled low down, his feet are drawn both to one side, so that his legs are parallel at an angle of thirty degrees. The heads of Africans are hard, their necks strong, and both, being perpendicular to the loads they are called to support, are seldom injured. It is the lower parts of the moving columns, where the weights

are alternately thrown on and off the jointed thighs and legs, that are the weakest. These necessarily are the first to give way under excessive burdens; and here are examples of their having yielded and broken down in every direction.—*Eubank's Life in Brazil.*

THE SOIL—FOOD OF PLANTS.

The sustenance of vegetables, their habits and modes of existence, constitutes the subject of one of the most remarkable works to which the present age has given birth. We allude to that of LIEBIG on "Organic Chemistry, applied to the Science and Art of Agriculture." The path which this distinguished philosopher has travelled with so much honor to himself, and such lasting benefit to his fellow-men, had been partially explored by his predecessors, who had investigated the nature of plants and soils, but the results of their labors and experiments were isolated and detached, and when collected, seemed, from their very nature, and the manner in which they had been obtained to perplex rather than enlighten. From these, with true German ingenuity and genius, LIEBIG has constructed a rational and comprehensive theory of vegetable life,—one that effectually lifts the soil from the hitherto concealed and inscrutable features of the mysterious, and lays bare to the comprehension of the most irrecondite student, the mechanism of that system, the operations of which are at once so beautiful and so august.

From LIEBIG, JOHNSTON, SPRENGEL, and others, who have entered of late with so much zeal upon the important subject, we ascertain a multitude of facts of the utmost practical importance in the prosecution of agricultural enterprises; for instance, that all soils contain a certain proportion of organic matter, chiefly of vegetable origin, though in some cases mixed with animal organizations; that this matter is combustible, and, consequently, is destroyed by fire; that in some soils this combustible matter often amounts to fifty or sixty per cent. of the entire weight, while in others, less than one per cent. is recognizable; that in all combustible soils, or those which are endued in an ordinary degree with the capacity of vegetable reproduction, the actually combustible portions consist of from ten to twelve different mineral constituents; that the absence of one or more of these constituents, renders the soil to a certain extent infructuous, and incapable of producing affluent, or even ordinary crops; that to such soils as are characterized by this deficiency, the constituents wanting to perfect the equilibrium or adjust the balance of elements, may be artificially supplied; that the excess of some of these principles, is, oftentimes, productive sterility, and must consequently be counteracted or removed, before the cultivator can reduce them to a profitable condition, and secure from them an adequate remuneration for his toil.

It has also been demonstrated, that in every plant produced on the earth's surface, a certain amount of inorganic matter is detectable; such, for instance, as silica, lime, potash, soda, magnesia, &c., and that in every system of manuring and cultivation, substances containing these elementary matters must be supplied to the soil in order to counteract the weakening effects of vegetation by returning to it the energizing principles requisite to the sustenance and perfection of the crops it is required to produce.

Were a soil to be cropped for a series of three or more years without the application of manure, it would become exhausted, cease to produce, and be ultimately rendered utterly sterile and waste.—By comprehending the nature of soils and plants, these men have been enabled to prepare rules for regulating the operations of the farmer, in cases where, before, he was likely to rely wholly upon hearsay-knowledge for direction.

For the New England Farmer.

SWEET POTATOES.

Sweet potato is a name we now hear everywhere. Carolina was the epithet generally employed among us, twenty years ago, to designate the wholesome root. It was then considered more of a luxury, and was scarcely seen beyond the tables of the rich. As its use has become more common, and its cultivation extended into higher latitudes, it has taken the name, that, without consulting dictionaries, the generality of people would naturally give it. I recollect the time, when the ruralist could scarcely ever procure this potato without sending expressly for it to the markets of the city. In vain would one inquire for it at the village store. It was rarely kept there.

The sweet potato, (*convolvulus batatas*), is indigenous to warm climates. Like many other tropical things, I believe it is better flavored, raised within the precincts of its true home. I say this, not merely from conjecture, but after having tested the difference, by eating some at tables of husbandmen dwelling on the banks of the Tombigbee, and in my own native State.

It was imported into England from the Indies by the way of Spain, before the Irish potato was known there, and was in those days supposed to possess the qualities of restoring decayed vigor to the human frame; and consequently more frequently found in the shop of the confectioner than in the larder of the cook. The kissing comfits of Falstaff, and such like confections, were principally made of batatas and eringo roots. It seems at its first introduction into England, to have held forth no inducement to the cultivator. In the days of Evelyn, it was, as an edible, in such *bad repute*, that he, in his work on gardening, as early as the year 1699, recommends that these potatoes should be planted in the worst ground. It grows in Spain and the Canary Islands, and one variety has been cultivated with success in the neighborhood of Paris. Time has shown that England's climate, at least, has proved uncongenial to improvements of any consequence respecting its out-door culture. The mists and rains about London are proverbial

Such extreme humidity is very unfavorable to the growth of this root.

In our own country, it used to be cultivated almost altogether in the southern States. It has been gradually advancing northward, till it is now raised of excellent quality, in the vicinity of Philadelphia. It is the opinion of some, that, by acclimation, it may become a profitable crop in certain districts of this State. While on a visit one autumn, at a farmer's in Groton, I ate some quite good ones, just dug from ground bordering the southern side of a fence. It is said they are cultivated in Plymouth county, quite equal in quality to those which come to us from New Jersey and Virginia. An article in the *Ploughman*, about two years ago, says: "The soil in Massachusetts is not generally adapted to the growth of this plant. But there are strips of interval, and here and there patches of warm, sandy land, which well-manured, would yield an abundant crop, much larger than is ever realized from the common potato. Its eating quality, raised on such land, is averred, by those who have tried the experiment in this State, to be equal to the best Jerseys." An editor of a certain agricultural paper says, referring to the cultivation of this nutritious root for fodder, "The late Mr. Lowell, of Roxbury, succeeded in raising them, and if we rightly recollect, he thought he could raise about as many on an acre, and as certainly as he could raise the Irish potato. If this can be done, their fattening power will be found much superior to that of the common potato." For several years past, I have been making trials in respect to cultivating them upon my own grounds. As to quality, I have never succeeded to satisfaction. In size I had one season about two bushels of them surpassing any Jersey ones seen at Faneuil Hall Market, or in the provision stores. Were my soil as warm, light and sandy as in some towns of the State, I believe, in suitable seasons, I could have them sufficiently good in quality for all culinary purposes.

Sweet potatoes are excellent for fodder. During my sojourn in Mississippi, I found them much used there for this purpose. Cattle and horses never refuse them. An abundance of them, rejected as to table use, was given to my stock last winter. The horses, especially, preferred them to anything else.

When dried in a brick oven, it is said they furnish the material for making a delightful and wholesome beverage in the shape of potato beer.

Southerners used to tell us there were twenty-four ways for cooking the sweet potato. It may be baked, boiled, fried, made into custards, puddings, pies, cakes, &c. I have eaten loaf-bread, having intermixed with the flower or meal a certain quantity of potato. Sometimes I have seen it made into a biscuit for breakfast, or a sort of hoe-cake for tea. It has been the chief ingredient of some of the best puddings I ever tasted. Pies may be made much in the same manner as squash or rhubarb. Sometimes the tender green shoots are boiled and eaten.

"The vine and leaf" says one, "somewhat resemble a bean trailing over the ground. Perhaps it still more resembles wild buckwheat, though its leaf is larger, and a yellower green." Another says:—"In its general appearance, when growing, the plant resembles the *convolvulus purpurea*, common morning glory, though of course not a climber, like the latter."

In this vicinity, it may be propagated by placing the seed-tubers (large ones I think are preferable,) lengthwise, end to end, across an ordinary hot-bed, in rows a small distance apart, covering them about two or three inches deep with mellow loam. In a fortnight, or thereabouts, each tuber will begin to throw up sprouts, ranging in number from five to thirty, close to the side of the potato deposited in the hot-bed. These sprouts, on attaining the length of three to five inches, are of suitable size for transplanting into the field. Care should be taken to break the sprouts off close to the parent, so as to keep some of the fibres upon them. If the potatoes are not too roughly handled, they will give a second and even a third crop of sprouts. In order that they may not be checked for a second crop, some prefer to break off the earliest sprouts in the ground. Mr. Goodrich says he has always found it safe to take the tuber quite out of the ground, while breaking off the sprouts. In such a case, they must, of course, be immediately replaced in the bed, and covered as before.

When the sprouts are nearly ready, have the ground, which should be of a warm, sandy, mellow, deep nature, plowed into ridges, [in our hot, dry summers, ridging is hardly necessary—Ed.] say 4 feet apart, and 12 to 15 inches high; or if preferred, into rows equidistant, 3 feet apart, so as to admit of cultivation both ways. The ground should be thoroughly pulverized and made as light as possible. Heavy manuring is perhaps inadvisable. A manure is needed, such as shall keep up the lightness of the soil, and enable it to hold a good heart. I would have it well-rotted, and thrown on broadcast.

I think it useless to attempt to grow this crop in compact, moist, rich soils. Except in a very dry, or warm season, the crop in such cases, is sure to suffer by an overgrowth of vines, with watery tubers. Set the sprouts, in making choice of ridge-culture, about 18 inches apart, inserting them in the soil in the same manner as cabbage plants. It is better to plant in a dry time, than when the earth is soaked with rain, for when the ground becomes dry, it will be apt to bake, and check the growth of the sprouts. Transplant them only in the latter part of the day. Water them sparingly with water of a moderate temperature. There should be occasional plowings, as long as the extent of the vines will allow it. No dirt should be thrown on the vines. In hoeing, never throw the vines into a cluster, about the top of the hill, it will hinder the sun from giving warmth to it to the extent desirable. The vines often make eight feet or more, in length, in a rich and moist soil, which is some longer than they need be, in order to have fine tubers. Some individuals nip the ends, in order to check the luxuriant growth. I have heard of it being recommended to keep them shortened in a foot till the first of August, and then allow them to take their own course. A New Jersey farmer recently declared to me it made no difference whether they were shortened or not. Roots are frequently thrown down at intervals along the trailing vines, which are apt to produce small tubers at the points. I have heard different opinions expressed as to the results of allowing the vines to fasten themselves beyond the immediate centre of the hill. I think shortening in is of no advantage, and that loosening may have its uses, according to the richness of the soil and the moisture of the weather.

The tubers almost always stand up vertically in the soil, instead of lying horizontally, as in the case of the common potato. I advise to dig before the first frost. If the vines are frosted, the potatoes, it is said, become watery, and will not keep any length of time. If it is not convenient to remove the tubers from the ground previous to the early frost, their separation from the vines may be effected by passing a sharp knife between, just above the surface of the ground.

In preserving these potatoes for winter use, they must always be kept unexposed to the atmosphere, in a dry place, where a pretty uniform temperature can be maintained, the safest range being between 50 to 60 degrees Fah. They should never be allowed to become sweaty. F—s.

For the New England Farmer.

MUCK AND PEAT.

Much is said of these for manure. I have used them in various ways, and find some equal to a rich compost, and some inferior to poor, sandy loam. It depends wholly on what they are made of, whether forest leaves, receiving the wash of rich fields, where the dung has been spread or lain all winter in heaps, or the wash of much travelled roads, or a poor bottomless pond hole.

Much is said of bones being dissolved by ashes or horse-dung; when pounded or ground to one-half inch pieces, and covered close in a heap with ashes, and not so that they will heat, they will dissolve, and if well covered with loam to save the ammonia, they are what is wanted. Much is said of sprinkling potato vines with ashes to kill the bug that causes the rot; but if there are ashes and lime enough in the ground, and good seed are planted, there will be good potatoes and no rot, either in potatoes or grapes.

I prepared a four acre lot (which had been entirely worn out,) with leached ashes, which contained lime, forty years ago, and have used ashes and bone dust occasionally, since. Potatoes have been planted on some part of it every year, and they have been invariably sound and good.

If a man will prosper in business, he must pay his debts, and if he would prosper in agriculture, he must put back something of the same nature which he has taken from a good soil. Exchanges of views are important; excuse this, and I have done.

Can you inform me what is the composition of Babbitt's grafting wax; you will oblige me by so doing. Yours very respectfully, PHINEAS PRATT.

REMARKS.—We do not know the composition of Babbitt's grafting wax.

CARROTS FOR HORSES.—Our horses are now feasting on orange carrots. Since we began feeding these they will not eat corn—it will remain all the day untouched in feeding troughs or boxes. Theorize and calculate as we may as to the greater expense of roots over Indian corn, and the greater quantity of nutritive value per acre of the latter, yet every farmer who has had experience with roots, must admit that they are indispensable for the preservation of the animal's health during the season of dry-feeding.

For the New England Farmer.

MANAGEMENT OF BEES.

MR. EDITOR:—I have read with pleasure several articles in the *Farmer* relative to the management of bees in winter, but no inducements to adopt any system are laid down. I am somewhat engaged in the culture of honey and the honey bee, and thus far have been very successful; yet there are drawbacks which require attention, which we can obviate if we will. I object to putting bees in a cellar, packing them in straw, and also burying in the ground. In the first place, a damp situation would sooner or later prove downright ruin to them, as it would be very likely to mould their combs and cause disease and death; I should as soon think of wintering a family of children in a cellar and having them come out healthy in the spring as, I would a swarm of bees. Packing them in straw is also wrong, as you must necessarily stop a free circulation of pure air, which is so essential to all animal life. The method of burying them in the ground, is, if possible, worse than either of the above, for a closer confinement and consequently a greater degree of dampness must prevail. I believe that under ordinary circumstances six swarms out of eight would either die or be worthless the first season, if buried in the ground. A swarm reduced from four thousand to two or three hundred would be almost worthless.

The method which I practice has been successful, never having lost a swarm either in winter or spring. My hives are twelve inches square inside, with an opening in front and rear for egress and ingress, three inches long and half an inch high, with a seven by nine glass inserted in the rear for the purpose of witnessing their operations, and ascertaining if they have a sufficient supply of honey for winter use, &c.; the glass to be covered by a door that can be opened and shut at pleasure.—About the first of December, the hive should be placed down closely upon the bottom board, with the front and rear entrance opened for a free circulation of pure air, which is indispensable. I now place the hive in a dark, unoccupied room, that is rather cold; even if the thermometer should run to ten or fifteen degrees below the freezing point it would do no harm, and should be kept at as even a temperature as possible. In this condition a swarm of bees will consume ten or twelve pounds of honey less than they would were they exposed to the rays of the sun. In the course of the winter, I occasionally open the doors in the rear of the hives to ascertain their condition, being careful to keep the frost and ice out of the entrances.

When sufficiently warm, say the last of March, they may be taken from the room and placed upon the bee-stand where they are to be kept for the summer, and if the weather be favorable, and the bees wish to issue out, I open the door in the rear of the hive for the purpose of letting in the light, being careful not to let any of the bees out until the door has been opened at least twenty-four hours, and by so doing I prevent them being blinded by the rays of the sun, especially when there is snow on the ground. Having practised the above system, I feel assured that there is no safer way, and feel confident that should any feel disposed to follow my directions, they would not fail of success.

My spring management is somewhat different;

having them now placed upon the stand, I close the rear entrance perfectly tight to stop the current of air under them, at the same time letting the rays of the sun strike fully upon the hives to assist in creating a sufficient degree of heat to propagate the eggs and larva, and at the same time ascertain if possible if there is a supply of honey; if not sure there is enough, feed with a little honey or syrup, and they will repay as many dollars as cents are paid for the trouble.

Z. VINTON.

East Bethel, Vt., April, 1856.

EXTRACTS AND REPLIES.

FATALITY AMONG LAMBS.

MR. EDITOR:—I wish to say a word in relation to a singular fatality among lambs in this vicinity, which, if it extensively prevails, as I think it does, will have a disastrous effect on the wool and mutton interest in Vt. I had about thirty ewes with lamb this spring, all in good condition, and the finest grade. The lambs began to come about the first of May, and down to this time, the 16th, I have but one lamb living, though I have had about twenty in all. It makes no difference whether they come in stormy or fair weather, it is all the same; they come into the world with just a breath of life in their body, and will live from half an hour to twenty-four. I could scarce get them to swallow any milk, and only two have ever stood on their feet.

Some farmers are able to raise most of their lambs, but all complain that they are very hard to raise, and some are as bad off as myself.

My sheep have not run among beechnuts this spring. Some say the trouble is caused by our cold winter. If you or any of your subscribers can give us any good reason for the lambs dying, I should be very thankful for the same.

CHARLES S. PAINE.

East Bethel, Vt., May 16th, 1856.

COW POISONED.

FRIEND FARMER:—On Saturday last, Mr. Joseph Cline, of this town, lost a very nice cow, poisoned by eating what we call Indian poke, or swamp cabbage. It grows in wet, swampy land, and has been used to soak corn in to poison crows, and is sure to accomplish the object.

Derry, N. H., 1856. W. N. WILKINSON.

BOUND VOLUMES.

G. F. H., *St. Albans, Vt.*—We can supply all the previous volumes of the *Farmer*, perfect, with the exception of the March number of vol. 6. Price \$1 25 a volume. The transactions of the Agricultural Societies of Mass., for 1855, are not yet published.

WATER PIPES.

D. PRATT, *Deep River*, in reply to inquiries about water pipes, states that block tin is used in that region, and found convenient and profitable.

LAUSON TAYLOR, *Sutton*.—We have not the book you mention, but will publish a table on the subject you mention when we can find or prepare one.

CATERPILLARS—STRIPED SQUIRREL.

MR. FARMER:—There seems to be various methods of destroying the caterpillar. "C." recommends to blow them off with gunpowder. W. G. Lewis feeds them with spirits of turpentine; others burn them with birch-bark torch, and I have seen one man shower them with soap-suds; but the best method I ever could find, is to take a dry mullein and poke it into the nest, then roll it in the fingers and wind them up in their own web and crush them under the feet. What few remain may be destroyed with the mullein, by sawing back and forth.

To prevent the striped squirrel digging up corn, feed them. They are like some bipeds we have seen, they will never dig, if they can possibly get a living without. Take shelled corn, and scatter into the cavities of the stone wall, or in the corners of the fence around the field, three or four quarts will be sufficient for a large field. I have tried it for many years, with complete success. H. BRIGGS.

Fairhaven, Vt.

RHODE ISLAND GREENING APPLE.

In answer to a subscriber's inquiry in Duxbury, about the Rhode Island Greening, I would say, your trees have probably too much top, so that there is not sap enough to nourish the tree and carry out the fruit to perfection. Apply more dressing after pruning, in the form of barn manure, oyster shells, lime, leached ashes, or if the ground be dry, chip dung; wash the trees occasionally with strong soft soap-suds, and keep the soil loose around them by plowing or digging around for some distance.

Deerfield Centre.

JAMES PRESCOTT.

GIFFORD MORGAN HORSE.

Is there a horse known as the "Gifford Morgan," if so, by whom owned, and where kept, and what is his pedigree.

J. W. A.

REMARKS.—There is, or has been a horse by the above name—but we can give no account of him. Brother HOWARD, of the *Cultivator*, will be likely to know.

WATER CEMENT FOR ROOFS.

I wish to know through you, or of those who may have tried it, if common water cement will make a tight and durable covering on a flat roof—too flat for shingles to turn water well? Will it stand heat and frost without cracking? If so how should it be applied?

If you or some of your correspondents will answer the above questions, you will oblige a

Henniker, 1856.

FARMER.

REMARKS.—The common water or hydraulic cement will not stand frost—that is, when the cement is subjected to water and frost.

MICHAEL, Bangor, Me.—Your article on "Banking up Houses," contains valuable suggestions. We shall reserve it for a more seasonable period.

WM. L. Green, Me.—We can give you no reliable information of the fertilizer or churn, which you inquire about.

CULTURE OF MILLET.

What kind of seed is the best to sow for fodder, and when is the best time to sow it? Will it do to sow it on stubble, or what kind of land will be best for it, the time to cut it, &c.?

A SUBSCRIBER.

Milford, Ct.

REMARKS.—There are two kinds of millet, the Turkish, and our common seed. The seed of the former resembles canary seed. We have never seen the plants growing. Should advise to sow our own. Any land suitable for corn or wheat will produce good millet. Sow about the first of June. Cut when just out of blossom.

POWDER-POST IN TIMBER.

MR. BROWN:—I wish to inquire the reason of walnut and white oak timber becoming powder-posted in the sap part of the timber at a certain stage of seasoning? Can you give a remedy?

Amherst, 1856.

A. B.

FISH AS A MANURE.

H. W. T., Taunton.—We should not think alewives at fifty cents per hundred and hauled four miles, would make a profitable manure. See article on the subject of fish manure in the April number of the *Monthly Farmer* for the present year, 1856.

NEW BUILDING MATERIAL.

To G. B. S., Uzbridge, Mass.—Fowler & Wells, N. Y. city, have published a little work entitled "A Home for All," which gives a good deal of information on the subject of building with concrete.

For the New England Farmer.

CORN MEAL AND FLOUR.

Did W. H. H. suppose he was at work upon me, or my fellow townsman, J. R.? Because it is a serious matter and no small honor to be noticed in a public journal; and until the "hash is settled," we, J. R. and myself, shall have a bone to pick between us. Having pointed out your correspondent's oversight, I will proceed to comment upon those portions of his communication that refer to me, and peradventure I may touch upon matter strictly concerning him and J. R., for which I shall have to crave the pardon of both, inasmuch as I am unable, at this time, to discern definitely wherein W. H. H.'s account with me lies. First, he wishes to know "why corn meal, containing two per cent. more gluten than wheat, will not make an adhesive dough? He had supposed that corn meal was deficient in gluten, partly because Dr. Pereira had said so," and partly for some reason which he omits to mention, but which I surmise to be this, viz.: because it would not make an adhesive dough. He supposed that inasmuch as gluten was known to possess powerful adhesive qualities—it being used on self-sealing envelopes, &c.—therefore the meal that contained it largely, ought to make an adhesive dough, but as corn meal did not do this, he concluded that it was "deficient in gluten." "Perhaps, however," he adds, "the good Dr. may be mistaken," a well timed and sensible ob-

servation truly. I have not Dr. P.'s work at hand, but Prof. Johnston says, as I stated in my first communication, that corn meal contains two per cent. more gluten than wheat flour. If these acknowledged authorities "agree to disagree," I shall agree not to interfere. But supposing Prof. J. to be right, and that meal contains more gluten than flour, and yet makes a less adhesive dough may not the anomaly be explained in whole, or in part, by the facts, first that meal is much coarser, and second, that it contains six, and sometimes seven per cent. more fat than flour? This is my answer to his first question.

Next he inquires, do one hundred barrels of fine wheat flour contain more or less nutritious matter than the same weight of oat or corn meal? My authority for saying less is Prof. Johnston, (vide Chemistry of Common Life, vol. 1, p. 86.) The last of his inquiries that I shall notice is, whether it is true that the "potato-eating Irish" have fair, round bellies? "Honest Mike Fagan, of Tipperary, avers that it is not true." Prof. Johnston says as follows: "The Hindoo who lives on rice, the negro who lives on the plantain, and the Irishman who lives exclusively on the potato, are all described as being more or less pot-bellied," (vide Chem. Com. Life, vol. 1, p. 99.) The reason of this is, that a given amount of starch—the substance that enters most largely into the composition of the potato—contains much less solid nutriment than the same amount of gluten, and consequently a larger quantity of starch must be eaten to supply the same amount of nutriment that may be obtained from a much smaller bulk of gluten. And the admission, in large quantities, of a substance so light and porous as starch into the stomach, would, it seems to me, have a decided tendency to enlarge that organ, and confer upon the individual a somewhat corpulent habit. However, the controversy lies between Michael and the distinguished chemist to whom I have twice alluded. Your correspondent's remaining remarks and inquiries I leave to J. R. to answer as he sees fit. The subjects to which they refer he is eminently qualified to elucidate. With one inquiry, I bid my friend, W. H. H., adieu. What does he understand by "tissue-forming material," gluten alone, or gluten combined with starch and fat?

Concord, April 7, 1856.

J. B. R.

SOURS OR ACIDS.

The sourness of the juice of a lemon and the acidity of vinegar are so well known that the mere mention of them is sufficient to convey a knowledge of the chief qualities of sours or acids in their natural state. There are so many acids that two or three pages of an index to a chemical book are taken up in enumerating them. Every fruit contains an acid; nearly all the metals are capable of forming acids. When coal, wood, paper, rag, charcoal, brimstone, phosphorus, and many other substances, are burned, acids are produced. A flint stone is an acid. There is an acid in our window glass, and in many of the most costly precious stones. The air we breathe contains an acid. We create an acid in the lungs by the act of breathing. By a very slight change sugar can be converted into oxalic acid, which is a strong poison. Sugar, by another change, is converted into vinegar. These two illustrations show that a sweet can be

converted into a sour; but when sour fruit becomes sweet it proves almost to demonstration that a sour can become a sweet acid.

The most powerful acid is that derived from burning sulphur—it is called sulphuric acid, and is one of the most important articles of manufacture. Its acidity is so great that a tea-spoonful is sufficient to make a pailful of water quite sour. Nitric acid, obtained from nitre or salt-petre, is of the next importance in the arts; it is so corrosive that it has long been distinguished by the name of *aqua fortis*, that is, strong water—strong, sure enough, for a nodule of iron, lead, or silver, dissolves in it like sugar placed in water. From the number of acids which we find in nature, and the tendency of many artificial substances to become sour, it is evident that acids and sours are essential to our life and well being. Acids assume all forms and colors; some are liquids, some gaseous, others solid. The acids of fruits, when separated from the grosser particles that accompany them, are very beautiful and crystalizable substances. By the ingenuity of the chemist, the sour of unripe apples, grapes, tamarinds, lemons, &c., may be crystalized into beautiful snow-white bodies, which, however, when touched by the tongue, at once indicate their origin by their flavor.—SEPTIMUS PRESSE, in *Scientific American*.

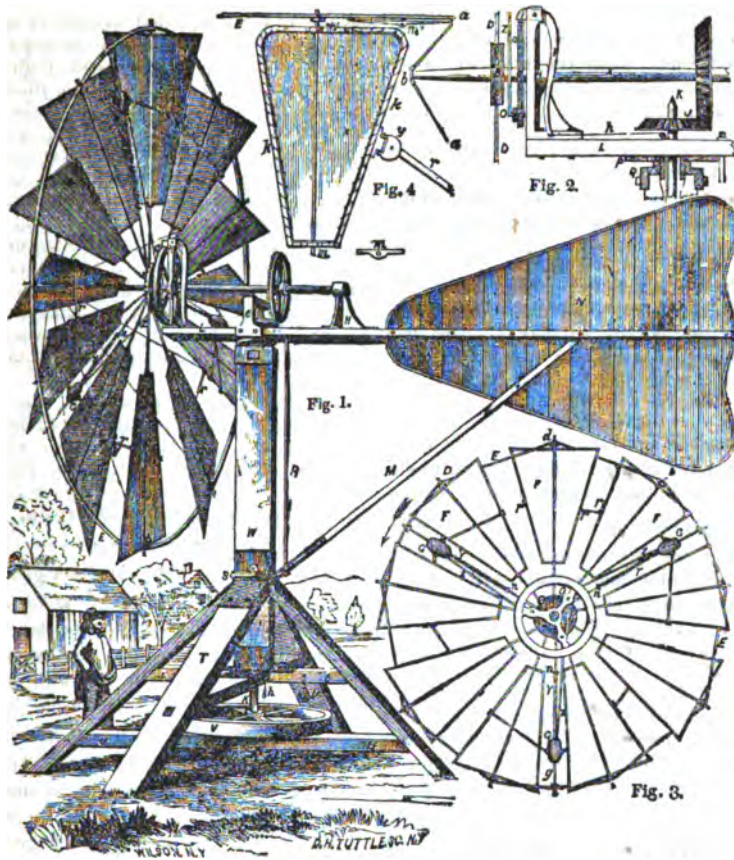
TO DESTROY CATERPILLARS.—A gentleman from Saugus, whose name we have forgotten, informs us that he has found the use of molasses very effectual in destroying caterpillars; that when they are in the nest he has smeared it over with molasses, and that none have ever escaped from it; that they cannot travel over a limb where the molasses has touched, and that it does not in any way injure the tree, and that upon the whole, he likes it better than lighted torches, gunpowder, soap-suds, whale oil soap, or even the thumb and finger! A cheap and easy remedy. Let the molasses "work."

APPLES WITHOUT BLOSSOM.—The following was sent us by a lady in Norwich, Vt., now at the advanced age of eighty-four years. It is written with her own hand, which is as clear and legible as the print you are now reading.

At Barre, Massachusetts, I saw two apple trees which never blossomed, but bore good sized, fair apples. I inquired into the philosophy of it, and was told it was by reversing the scion when grafted.

M. D. R.

PARNIPS FOR STOCK.—The *Prairie Farmer* of March 27th, in a valuable article on the Parsnip, says:—It is excellent as food for horses, cattle and swine. It is more nutritious than the carrot. The winter butter from the cows of Jersey and Guernsey, fed on the parsnip, is almost as rich in flavor and color, as when they are fed in pastures. It bears frost well. If left in the ground all winter, it will be good in the spring. Its ash has 36 per cent. potash. Wood ashes make a good manure for it. It is more hardy, and less liable to disease and to insects than the carrot. It may be sown, says the *Albany Cultivator*, in the fall.



PATENT SELF-REGULATING WIND-MILL.

The wind has been pressed into the service of man on land, as well as on the sea, in many ways. It raised the water to irrigate the lands of the ancients, as well as to winnow their grain and fill their sails. Some interesting relics are left of the wind-mills of our fathers, erected soon after the settlement at Plymouth. But generally, they have been found somewhat uncontrollable, and liable to be broken in high winds. It is said that the one here represented is cheap and not liable to this objection.

The *Pennsylvania Farm Journal*, from which we take the description, says the accompanying engravings illustrate an improvement for which a patent was granted to Dr. Frank G. Johnson, No. 196 Bridge St., Brooklyn, N. Y., on the 16th of January, 1856.

The invention consists in providing the wings of the machine with weights and springs, which are

causing them, whenever their velocity is too great, to be more or less turned edgewise to the wind, and *vice versa*. Also in providing the wind-wheel with a stop wheel, arranged in such a manner that a slight pressure on the stop wheel has the same effect on the wings as an increased velocity of the wind, thus enabling the wings to be turned edgewise to the wind, and the mill to be thereby stopped at pleasure.

In the engraving fig. 1 is a perspective, and figs. 2, 3, 4, sectional views of the improvements. Similar letters refer to the same parts.

The sliding weights G, figs. 1 and 3; connecting rods, r, and spiral springs, Y, constitute the governor or regulating apparatus. When the wheel revolves at its maximum velocity, the weights by centrifugal force are thrown out from the centre, and the extremities of the rods, r, drawn closer together—

er, which causes the wings to turn edgewise to the wind. The tendency of the mill now is to revolve slower and slower, until the tension of the springs shall overcome the centrifugal force of the weights, which will slip or draw them in towards the centre again, and thus turn the wings flat to receive the wind, and give the mill, whenever the wind is sufficiently strong, a uniform velocity, irrespective of the variation of wind and resistance presented to it. One weight controls three wings, by connecting one to another. To give the mill greater or less velocity it is only necessary to diminish or increase the tension of the springs, Y, which is done by turning the nuts, n, out from or in towards the centre. To provide against strong and sudden gusts of wind, the wings are made wider on the back than on the front side of their bearings, so that they will turn back and crowd the weights out from the centre, before the velocity necessary to do the same could be acquired.

The stop-wheel, C, and the rods, Z, connecting it and the weights, constitute the stopping apparatus which, operates as follows:—Thus, suppose brake I (fig. 2) to be pressing upon the stop-wheel, and thus stopping, or rather holding back, said wheel; while the main wheel turns on, then the point, O, would rise to o, or as far above the wind-shaft as it is now below it, and thus throw out the weights from G to g, and turn all the wings edgewise to the wind, causing them to stand still until the brake is released; the brake is made to operate by means of a weight hung upon cord h. This governor and stopping apparatus, it will be seen, revolve with and constitute a part of the wind wheel, and are independent of every other part of the mill, thus making the wind wheel alone self-regulating, and almost stopping in spite of the gale.

By means of the brace M, and collar, S, together with the iron bar, R, the strain of the mill, in its tendency to be blown over, is brought on the bottom of the post or standard as well as on the top. If the mill were sustained by a continuation of the spindle, P, a distance down into the post, the whole mill, by the peculiar action of the wind, would acquire a rocking motion, placing the spindle and post in danger of being broken off, which liability is wholly prevented by the above arrangement.—Rotary motion is transmitted from the wind-wheel to pulley V, by gearing, in the usual manner.

Its parts are simple; they are nearly all made of strong iron, so as to be very durable. Many of the parts are provided with adjusting screws, whereby a proper degree of tension may be secured; the machine may also be taken down, removed, and put up again very easily. These mills are sold at prices ranging from \$50 to \$800, according to size. For the lowest sum a machine is furnished having about the power, during a pleasant breeze, of one man.

For the New England Farmer.

IMPERFECTIONS.

MR. EDITOR:—Having been a subscriber to your paper for more than one year, I am free to say that I know of no monthly publication which, in my opinion, is doing an equal amount of good. Yet, I would beg leave to say that in my judgment it might be made far better, without any additional cost. I refer to the fact, that the Post Office address of very many of your correspondents is omitted, which to me is a great loss. The cause becomes quite apparent, from the least reflection. Public discussion upon agricultural matters, all agree, is of vast importance, and it is pleasing to know that numerous clubs, or associations, have been formed in most of the New England States for the laudable purpose of diffusing useful knowledge upon this important branch of industry. It is, however, to be regretted that the great majority of those engaged in agricultural pursuits cannot, or do not, participate in the great benefits to be derived from these meetings.

Some, indeed, seem to have so large a "bump" of self-conceit, that they *will not be taught*, while others aim with great care to do as did their fathers. There is, however, a large class who are aiming at improvements. They are not satisfied with present attainments, but regard the experience and experiments of others as worthy of their notice; consequently, they seek to learn by means of the press what others say upon these matters in which they are so deeply interested. It is, however, obvious that few printed communications on agricultural subjects are so explicit as to require no additional explanations. This defect, if it exist, can only be supplied by means of epistolary correspondence through the post-office. Hence, I trust, all will see the importance of having the post-office address clearly attached to the names of those who are contributing so largely to the columns of a work so universally popular and reliable as the *New England Farmer*.
SOLOMON STEELE.

Derby Line, Vt., Feb., 1856.

For the New England Farmer

THE PAST WINTER,

AND THE VERMONT CENTRAL RAILROAD.

MR. FARMER:—Some thirty years since a German Duke travelled through a portion of Canada and "the States," and published his two volumes of travels on his return. Of Vermont, he said, "The women of Vermont are very fat, have yellow hair, and all smoke." It seems he passed through Lake Champlain, did not land, and only saw some emigrants on one of our wharves, just from the old counthrie. This statement is much like your New Hampshire correspondent's, published in your paper of the 3d inst.

In my statement of weather, &c., dated Feb. 11, I said, "The trains on the Central Railroad, from Windsor on (printed over) Connecticut River to Burlington on Lake Champlain, have not lost a trip, nor have they been delayed so as to be more than fifteen minutes behind making time on this road—sometimes late caused by non-arrival of trains on connecting roads."

The data for this and the Vermont and Canada road was taken at the office of the Central road on

the 10th, and written on the 11th February and sent you. On the 12th, the same night friend Varney was so unfortunate as to be an hour late, we had a slight blow. Still, friend Varney should not have growled at one hour's detention, as had he, the same day, taken the southern route via Bel-lows Falls, he would have stopped at a farm-house on the mountain, and been, instead of one, thirty-six hours behind time, notwithstanding the roads in our valley were all in running order.

A statement of the weather from Feb. 11 to this time would surprise him quite as much as the last, (which I assure him was strictly true,) and convince even so great a traveller as he is, that the valley of Lake Champlain has "presented an exception" to the generally severe past winter. I may soon make comparative tables, and send you.

If friend Varney had seen a fat, yellow-haired woman smoking at St. Albans, and had made the same statement of the women of Vermont that the German Duke did, he would not have been more unfortunate in his conclusions than he has been in the present case.

C. GOODRICH.

Burlington, Vt., May 26, 1856.

For the New England Farmer.

THE PROFIT OF FATTENING SWINE.

BY F. HOLBROOK.

In an article in the *Monthly Farmer* for April, 1854, I endeavored to show that swine may be profitably fattened in New England; and in the *Farmer* for May, 1854, and again in that for July, 1855, I gave the results of experiments in feeding pigs, instituted for the purpose of testing the soundness of the views advanced in my first article. Since writing those papers, I have made yet another trial of the cost and profit of feeding, and will now give the details.

On the 2d of January, 1856, I commenced feeding five lean shoats, weighing respectively, 80, 77, 70, 66 and 61 lbs., or, in all, 354 lbs., gross weight. They were placed in apartments consisting of a compost pen, about 10 feet wide, by 14 feet long, and an eating-room connected therewith. The litter made by two horses was daily thrown into the pen; scrapings from the woods, consisting of leaves, decayed sticks and rich mould, were occasionally added, say two loads or a cord once a fortnight; and clean straw was frequently given to the pigs, which they arranged in the pen, for bedding, to suit themselves. It was quite an advantage to have the pigs make their bed in the compost heap, as the pen not being very large, the whole heap was influenced by the heat generated by the pigs while lying in their bed, so that it did not freeze deeply, even in the coldest weather. The litter from the horses also contributed to keep out frost.

As in the experiments heretofore made, so also in this, the pigs were fed on corn and cob meal,—the rule being to give them all they would eat with a good appetite, and keep the trough clean. Immediately after feeding them at a given time, the

meal for the next feeding was placed in the bucket, hot water poured on to scald it, and the wash of the kitchen afterwards added, the mess standing in a warm place the while, to soak and swell. Each grist of ears of corn, when put up to be ground for the pigs, was carefully measured, and at once charged to them, so that all shrinkage from toll taken out or otherwise, was placed to their debit. Entire accuracy was aimed at in keeping the account.

The pigs were thus treated till the 8th of April last, when they were sold to the butcher at 9 cents the pound, dressed,—he charging for the slaughtering. The five weighed, dressed, 785 lbs. They consumed eighty-four bushels of corn and cob, or forty-two bushels of clear corn. During the time of feeding, they were supplied with twelve loads of raw material from the woods, which they pulverized and enriched, and mixed with the litter from the horses and the straw for bedding, making up a compost of the best quality, both as regards material and mode of manufacture.

Corn was worth in January last, in this market, about one dollar and ten cents per bushel; but has been gradually falling in price, till now it is about eighty cents, by the quantity.

The five pigs may be accounted with as follows:

785 lbs. of pork, net, at 9 cents per lb.	\$70,65
Deduct 84 bushels corn and cob, or 42 bushels clear corn, at an average price of \$1 per bu.	..\$42,00
Deduct paid for slaughtering the five	3,75
Deduct paid for the lean shoats @ \$4 each	20,00
	65,75

Balance, above the market value of corn consumed....\$4,90

And the pigs have converted 12 loads of raw material into good compost, worth a bushel of corn, or \$1 per load.....\$12,00

From which, if you please, deduct the cost of furnishing material, say 60 cents per load, which is pretty high.....6,00 6,00

Profit on the five pigs.....\$10,90

This is the sixth experiment I have made, to ascertain the cost and profit of fattening swine, and it shows less profit than any other one of the six; and I attribute the smaller return mainly to the extreme and long-continued cold weather of the past winter. Probably, if I had fed these pigs a month longer, so as to have given them the advantages of warmer weather, to lay on fat, the gain in proportion to the corn consumed would have been materially greater than now appears. However, extremely unfavorable as the season was, yet the pigs paid more for the corn consumed, than it could have been sold for in market, by the quantity, and supplied a pile of compost worth more than they get credit for in the account.

Here, in New England, we must use all resources available at a reasonable cost, if we would keep our best lands up to the desirable pitch of fertility, and much more, if we would improve those that have been worn by long and severe cropping, or that never, by nature, had more than a thin hungry soil. The means for the most part employed must be those

afforded by the farm itself. My object, in all these experiments with swine, has been to show to myself and to others, one of the ways in which the products of the farm may be disposed of so as to give them back to it in compost with materials otherwise lying waste or idle, and get as good a price for the crop as though it had been directly exchanged for money. Here is the policy for him who desires to live by farming: so direct the business as to obtain a reasonable return for capital and labor invested, without robbing the soil. He who, eager for a present income, regardless of the future condition of his farm, takes all from it he can get, returning little or nothing back, is not unlike the man in the fable, who fortunately possessing a goose that laid a golden egg every day, was not content with so sure but slow, an income, and thinking to seize a large treasure at once, mangled and tortured the faithful goose, and in the end lost all.

F. HOLBROOK.

Brattleboro', May 27, 1856.

For the New England Farmer.

STONE WATER PIPES.

MR. EDITOR:—In the monthly *Farmer* for May I noticed an inquiry made by H. Morse, of Johnson, Vt., as to the best material to use for conveying water to buildings. Some two years ago, I commenced the manufacture of drain tile in Whately, and the thought occurred to me that a pipe for aqueduct purposes might be made of stone ware, which would be the desideratum, both as regards cost and durability, and not only that, but freedom from deleterious matter, as there is no poisonous substance used in the manufacture of stone ware. The only articles used in its composition are clay, (commonly known as pipe clay,) and salt, which forms the outside glazing, applied when the ware is at a white heat. The inside glazing is composed of common clay. So you see that there can be no objection to the material, so far as that is concerned. I therefore made a quantity of the pipe, in sections of two feet, one end of each having a socket or enlargement to receive the other end of its fellow into it, some two inches or more; this joint is made tight by means of melted brimstone being poured into the space remaining in the socket, thus making a perfectly tight joint. They should be laid below the effects of the frost, or the liability of cattle stepping on them. In that case I do not know of anything that will compare with it for durability or cheapness. The pipe, I have since learned, is manufactured extensively in Ohio, and to some extent in Somerset, in this State. It has been submitted to a test, to ascertain its strength, by A. Stanwood, formerly superintendent of pipes, Cochituate Water-works, and found to sustain a pressure of 300 pounds to the square inch, or greater than a column of water 650 feet high, without injury to the pipe. Messrs. Bemis & McClellan, of Chicopee, have a large quantity laid, and speak of it thus:—"It has been in constant use since it was laid, conveying the water to our entire satisfaction. We have great confidence in its durability, and believe it to be superior to lead

or iron; and have given orders for more to take the place of iron."

I regret that there is not some one in this region that would commence the manufacture on a large scale, as I am continually having applications for it. It is out of my line, and I have as much to do at drain tile as I can attend to.

JAMES M. CRAFTS.

Whately, Mass., May 15, 1856.

For the New England Farmer.

WHY SMALL POTATOES ARE BEST.

MR. BROWN:—I have seen much in your excellent paper on the planting of large and small potatoes, as seed for crops. I take neither side in the controversy. If I took either, I should incline to the small potato party, and my reasons for so doing you will see in what follows.

That which vegetates in the potato is the eye.—It would seem, at first sight, likely to make little difference, whether the eye of the larger or smaller potato were used for seed. Indeed, it would seem, that as more of the nutritive matter of the potato surrounds the eye in a large than in a small potato, it would be better to use the large potato than the small one for seed. But herein is the evil which follows the use of the larger potato for this purpose—to wit, the quantity of alimentary matter, in a large potato, is disadvantageous, by promoting too great a development of stems and leaves; while on the other hand, the less alimentary matter in a small potato makes it better for seed to produce good crops than a large one, because it less promotes rankness of stems and leaves.

But still a question remains behind, *why use the potato, large or small, whole, for seed?* Why raise a question between large and small potatoes, brethren of the same family, and each entitled to produce after its kind? When I was a boy, it was the employment of "us boys" to cut the potatoes in the evenings, during planting-time, into sets for planting. I suppose this is done now, not to save seed, but because potatoes, when planted as sets, run less to tops and stems than whole tubers, and produce more than whole tubers. I last year planted a small piece of land with potatoes of fair size, and another piece of land with potatoes cut in sets. My man testified, with Irish vehemence, that the whole potatoes gave stalks and to spare; but that the sets yielded abundantly of *praters*.

But as I am accused of borrowing my wit, without giving the lender credit, (and I confess I do borrow it all, for I came into the world with none, and could never originate any,) I will quote Lindley, no mean authority. After saying that in laying down cuttings of the grape vine, each eye must have a large piece of albumen attached to it to nourish it, Lindley adds, "The provision of alimentary matter may, however, be, in some case, disadvantageous, by promoting too great a development of stems and leaves, of which the potato itself is an instance. Theoretically, the more nutritive matter there is for the eyes, the greater crop there will be; and so, probably, there is of leaves and stems; and it would seem that whole potatoes should be more advantageous to plant than sets. But I have proved, by a series of numerous experiments, that the weight of potatoes, per acre, is greater, under equal circumstances, from sets than from whole tubers,

by upwards of from seven hundred weight to three tons per acre; and considerably more, on comparison of the clear produce, after deducting the weight of sets, in both cases. In these instances, I supposed the rankness of the vegetation, from the whole tubers, to be the cause of the diminished crop; for the stems were unable to support themselves, and were blown about, laid, and broken by the wind."

M.

For the New England Farmer.

LUTHER CARLTON.

MR. EDITOR:—Believing the plan which you announced a few weeks since of publishing brief biographical sketches of "men distinguished for their ability and influence in matters pertaining to agriculture," will prove to be one of the most valuable features of your excellent journal, I have written for publication the following notice of the life of this individual, although I have too much regard for his well-known modesty, to claim for him a rank among the "distinguished," in the ordinary sense of that word. Born in the neighborhood in which he lived and died, he passed the quiet and undistinguished life of a country farmer. And it is for this reason, that his example in many respects may be of greater value to those who are struggling with the obstacles and discouragements that he encountered, than it would be had his course been marked by those rare events, or those uncommon qualities, which, falling to the lot of the few, make them prominent, distinguished, famous. The great and the glaring, the uncommon and the rare, have long been the exclusive subjects of the biographer. And were it to be announced to-day that the real object of biography is to excite dissatisfaction with the business of farming and the occupations of everyday-life, and to teach the young to look to trade, speculation, politics, literature and war as the only avenues to wealth and honor, would our books on that subject need any alteration or revision?—Would not their examples be directly to the point? But if biography is to teach the philosophy of common life by examples that shall afford hope and encouragement to the multitude who find its trials and difficulties disheartening, then there must be a radical change. Napoleon made the Life of Alexander his constant companion; the merchant can do the same with the Diary and Correspondence of Amos Lawrence; and the politician may do well, perhaps, to study the history of Talleyrand;—but whose biography affords a model for the young farmer? Where shall he find examples applicable to his sphere, and possible with his means? It cannot be doubted that perseverance, tact, skill, generalship, and all the nobler traits of human nature, are as often displayed on the farm as in the camp, the cabinet or the counting-house. Let it, then, become a part of the duty of agricultural papers to furnish these examples; and until the attractions of style and manner which good writers have the power of throwing around the subjects of their pen can be secured, something may be done by those of less humble claims, by presenting the example of good and faithful men, to encourage to perseverance in the duties of common life, and to contentment with the character of a citizen and neighbor.

The subject of this notice was born in Reading, Windsor County, Vermont, January 21, 1792, and

died February 24, 1856. Being the oldest of his father's family, his services were required at home at so early an age that even the scanty advantages of the district school of those days were in his case considerably abridged. Probably reading, writing, spelling and arithmetic were the only branches to which he paid any attention at school. Atlases, or maps, of any kind were not introduced until many years after his leaving school, and he has told his children that he was indebted to the books he bought for them, for his first lesson in geography.

After twenty-one years of age, Mr. Carlton worked out by the month for about five years.—Farm wages were then much lower than at present, while some things that a young man has to buy were much higher. Aside from one year that he worked for his father and received a pair of steers worth forty dollars, his wages probably averaged less than ten dollars a month, and he paid as high as fifty cents a yard for cotton cloth for his shirts. Yet the savings of these years, insignificant as so small a sum is apt to appear to young men, proved the foundation of a competence that many fail to secure with much larger wages and more favorable opportunities.

Two or three years after his marriage, he assumed the maintenance of his wife's parents, and moved on to their farm. This undertaking so often attended by more or less of family jealousy and trouble, was performed to the entire satisfaction both of the old people and of their children and grandchildren, who at the death of his father-in-law, the late Dea. Nathaniel Pratt, numbered forty-six, including great-grandchildren, most of whom resided but a short distance from the old homestead, to which they were perhaps more than ordinarily attached. As one of the number, I feel it but justice to add that our frequent visits to our grand-parents were as pleasant and cordial after the transfer of the property as before. This fact, which might be regarded as strictly a family or personal matter, is alluded to with the impression that it may afford a valuable suggestion to all who are or may be placed in similar circumstances. "New lords, new laws," is an old adage. And it is but natural for those situated as Mr. Carlton was, to feel that others ought to respect such a change of ownership as took place in this case, while those relatives, on the other hand, who have been accustomed from their infancy to regard the old place as a home, find it difficult to respect the rights of a new occupant.

At the time Mr. C. took possession of the old farm, it had become so run out as to produce, the first year, little more hay than would feed the stock that he had bound himself to keep for the exclusive use of the old people, and from the want of necessary farm-buildings, he lost four young cattle the first winter. The estate was somewhat in debt, and money so scarce that he was obliged to pay 12 per cent. for some he had to borrow to meet his taxes and other pressing demands. It was a dark day, and fortune seemed against him. A piece of cloth that his wife had made for a cloak for herself was sold to a young man who wanted a wedding-suit, and paid for with a note which proved worthless, when offered to the merchant to whose account it was intended to apply. Under the circumstances this was a heavy loss, and he often spoke of its taking him four years to outgrow the loss of fifteen dollars! The next web that was manufac-

tured for the cloak was again disposed of in part payment of the purchase of a horse for the old people, in place of one that died. With such a wife a man might well take courage. I have often heard him say that for three years they did not spend so much as "a quarter" by way of pleasure or amusement. The first money he received from his farm was by the sale of wool from the middle of the fleece, at twenty-five cents a pound—the remnants being kept at home to be worked up in his family. The difficulty which the farmers of that day, and of that section, experienced in obtaining money, will hardly be appreciated by the young men of the present time. Nor will they understand how a man of Mr. Carlton's skill to plan, and of his energy and perseverance to execute, could have felt the loss of fifteen dollars for four years. The sale of a few lambs was then almost the only resource for raising money with many farmers in Vermont. They manufactured their own clothing, and, with the aid of a blacksmith, pretty much all of their own tools, and thus managed to get along with very little ready cash; consequently the reception of a small sum was an event to be remembered, especially when as in this case, it came as the "first fruits" of his labor. The produce and stock of his farm, however, soon increased, so that he was able to devote a small sum annually to the reduction of his debts, after providing for the support of a large family. I regret that I am not able to speak more particularly of the improvements which he has effected upon the farm. But perhaps it is sufficient to say that he added something to the "grand list" of the town—something to the real wealth of the country, by his well directed labors, based upon the principle of cultivating thoroughly and manuring highly all the land he plowed, and of keeping good stock or none.

Mr. Carlton was not a trading farmer. He never bought an animal or anything else, for the mere purpose of traffic. This I am aware is not in accordance with the advice of some agricultural writers, who hold that skill in trading is as essential to success in farming as in commerce. It was not from the want of judgment, or knowledge of the value of property, that he refrained from trading. Few men knew better the worth of both real and personal estate. The opinion of Mr. Carlton as to the value of a farm or an animal was often consulted by his relatives and neighbors, and they considered themselves safe in acting upon it. Perhaps the value of his example in this respect would be better appreciated by trading farmers were they to estimate fairly all the incidental expenses of money, time, and distraction of mind which their most lucky trades really cost. The only advice in relation to business Mr. C. gave his son during his last illness was—to work what he was able to on a farm, trade no more than was necessary for his farming business, and to keep his name from other people's paper.

Mr. C. was a strong temperance man, even when almost all farmers used ardent spirits, at least in haying-time. I have heard him speak of his course when he was a young man and worked with those who drank their morning "bitters." "While they were mixing their grog," he said, "I would take a cup, go to the yard and drink as much milk as I wanted fresh from the cow. I could then mow with comfort till breakfast time, while others often complained of faintness long before the horn sounded."

Mr. Carlton was contented with the business of farming, and never seemed to envy the success, either apparent or real, of other professions. His was not a mind to be captivated by show or tinsel. "Others may dress better, and appear in finer style than farmers, but in the end," I have often heard him remark, "they may not find themselves so far ahead of us."

It has been the purpose of this notice to allude only to those incidents of his life and those traits of his character which may afford examples for the imitation or for the encouragement of young farmers, and to avoid everything that is merely eulogistic; and, on this principle I cannot avoid a reference to his course in respect to public offices. He held that those who accepted office ought to have both time and money to spare. Although in later life he represented his town in the State Legislature for two years, and held many other town offices, he persisted in declining all that he thought would interfere with his business, until he found that his circumstances warranted him in accepting.

It is not supposed that the foregoing does full justice to the character of Mr. Carlton. I have neither the facts nor the ability to justify the attempt. My simple effort has been to make the best use in my power of some of the examples which his life afforded of industry, perseverance and well-doing. But even this fragmentary notice would be too imperfect without allusion to his character and example as a neighbor. In trouble and affliction his advice and assistance was frequently sought. In sickness, death and funerals his services were freely offered and gratefully accepted. And when, at last, the same sad offices were required for him, the heartfelt respect and esteem which was manifested by his neighbors and townsmen, suggests to my mind the inquiry, whether in our efforts to secure the respect of the community and to obtain an honorable standing in society, we do not too often overlook those almost undefinable little acts of kindness and friendliness which ever mark the character of the good neighbor and the good citizen.

S. FLETCHER.

Winchester, Mass., May, 1856.

PLANTING CORN BY HORSE POWER.

Some weeks since we gave an engraving of *Biltings' Corn Planter*, and spoke in general terms of its construction, and its apparent ability to do the work well and with rapidity. At that time we had not used it in the field, and could judge of it only by its appearance, and by the application to it of certain principles of construction which are indispensable in such a machine.

On the thirtieth of May, having a field of about four acres in readiness for planting, we introduced the Planter. The field was partially on a hill-side, had both fast and loose stones, and plenty of witch grass. Before taking it to the field we made a thorough trial with it on a common road, where there was not a sufficient depth of loose earth to cover up all the corn, and where we could plainly see its operations. The trial here being satisfactory, we took it to the field with confidence, mounted a Boston boy on a good horse, and started off. After

going across the field two or three times, and watching the droppings with an interest which the tyro usually feels when engaged in his first achievement, we hauled up and commenced an exploration in the track which the roller made, to learn how matters stood below. Ah, here they are, one, two, three-- but where are the fourth, fifth and sixth kernels? It scatters a little, the boy has found them. All right. Mount! In a twinkling the boy was mounted again, Pegasus took up a lively walk, click, click, click, went the machine, and four hours of steady application planted the field, comprising a little less than four acres!

The corn, we think, is planted as well as it could possibly be done by hand; being placed in straight lines and covered at a uniform depth, and what is pleasant, we found the machine admirably adapted for clearing its own way, and putting the ground in the best condition for receiving the corn. It is held easy, sitting uprightly on its planes and the roller, and pushes aside the stones, old corn butts, &c., while the curved iron plates behind the mould-boards draw the fine soil upon the corn immediately before the roller as it passes along. We believe a person having three acres of corn to plant annually will be the gainer by purchasing this machine. We write without the suggestion or knowledge of any one having an interest in the manufacture or sale of the Planter.

For the New England Farmer.

TREATMENT OF PLUM TREES.

MR. EDITOR:—Some few days since, I read a short article in the *Boston Daily Journal*, wherein the writer gave his experience of his treatment of plum trees diseased by warts, or those black, rough excrescences, which sometimes attack these kind of trees. As the writer's experience and mine so strikingly coincided, indulge me with some remarks on the subject. I can vouch for the efficacy of that treatment; while his method is a little different from mine, the principle is the same. The writer of that article, in the first place, cut off all the diseased parts of the tree, which strikes me as a very good plan, and then washed them with strong salt water. My method has been to apply salt freely to the roots of the tree, and during the leafing and flowering period, when the tree is wet with dew or rain, throw fine salt over the branches; and I can truly say, that, by this treatment, I have never failed of curing the most inveterate cases I have met with. Not only does the salt treatment cure the warts, but it acts as a powerful stimulant to the plum tree, and by salting them freely, with such other care as every one should bestow upon his fruit trees, I have seen those which had not for years perfected any fruit, bear profusely, and bring it to the most luscious perfection. I can, with confidence, recommend this treatment for plum trees, and feel perfectly assured that those who will try it will be amply rewarded for their trouble. For the coming six weeks, all kinds of fruit trees will need their greatest attention. If

those having them wish to have good fruit and thrifty trees, they must not expect them without. Their culture is one of the most delightful employments of the farm—and how liberal the reward they bestow for all the care they receive; and then, too, what an ornament they are, scattered over the farm, giving their soothing shade to man and beast during the hot sunshine, gratifying the palate with their luscious, fleshy fruit, and delighting the eye with their beauty; affording a treble pleasure for the attention which the careful tiller bestows. How largely fruit enters into the happiness and comforts of life! Mr. Editor, now I have my pen in the business, permit me to say a few words about a wash for trees; not only the apple, but almost any other kind of a tree. Where you wish to destroy all kinds of vermin which attach themselves to their bark and limbs, I think it will not injure even the plum. I refer to the solution of common potash—about a pound, to two gallons of water. This is no new thing; its use for such purpose is older, I presume, than the writer of this, and without any disparagement of any other wash, which different persons may fancy; I can safely say—as the loafer said about rum—for a steady wash, there is nothing to compare with it. I have used it upon old trees and young trees, in all stages of their growth—and if used at the strength here recommended, I do not hesitate to warrant it to produce no injury whatever to the tree. The present is as good a time as any other to make the first application, and with an old broom, or what I prefer as far better, a good sized sponge—prepared before using, by taking a common darning needle, with good strong twine, sew through and through it, in all directions, which will make it wear a great deal longer—fasten it to a suitable handle. A man can easily wash two hundred tree trunks a day. Most farmers sadly neglect their trees; but a few minutes a day, for the coming six weeks, devoted to this department of the farm, will pretty much do up the business for the season. For instance, how easy it will be some of these dewy mornings, while every caterpillar's nest will glisten in the sun, just to take a light ladder, and with the hand covered with an old mitten, or not, just as suits the fancy, give a hundred or two nests—if there be as many—a hearty squeeze of the hand, as a welcome to spring. But just let these fellows have their own way, a month or two, and they will laugh in your face, and bid defiance to your hand, or most anything else you may resort to, to get rid of them for this season. And then, what a prominent sign of your negligence and carelessness they will present, all over your trees, to every passer-by. Also to that committee which you expect, ere long, to view the improvements on your farm. Now do not let this matter have the go-by, amid the pressing duties of the farm, at this busy season. My word for it, a squeeze in time—in this business—saves nine, you will be astonished to find how easily this business is accomplished, if only taken in time. Therefore, take time by the foretop and go at it.

May, 1856.

NORFOLK.

REMARKS.—We like all our correspondent's letter, except the wash which he recommends. Our readers well know how often we have spoken against the potash wash. Made of the strength the writer recommends, and in careful hands, it

may be used without injury. But in hundreds of cases, even of that strength, it would prove exceedingly injurious. We can point to many orchards to sustain these statements. There is no need of using potash. Soft soap answers all the desired purposes,—but even that needs to be diluted. If trees are well taken care of constantly, there is no occasion for violent remedies.

For the New England Farmer.

SONG SPARROW—HABITS OF BIRDS.

MR. EDITOR:—I notice articles occasionally in your paper in relation to the birds. Feeling a deep interest in the study of Ornithology, I always read all that is written on the subject with avidity. Now permit me to contribute a few lines on the subject which lies next my heart. I will take my little favorite, the common *Song Sparrow*, (*Fringilla Melodia*), as a subject for my pen. I have made this little bird my special study for the last six years, and now I think I can develop something new in relation to its song, that writers on the subject have failed to notice. Birds all have their peculiar ways of singing. Some have a monotonous song, as the Bay-winged Sparrow. The Yellow-bird has a continuous chatter without any particular form of song. The Cat-bird is a mocker. The Golden Robin has a song of its own, but each one may have a song of his own, though those of the same locality are apt to sing the same tune. The Hermit Thrush has a round of variations, perhaps the sweetest singer of the feathered choir. But the Song Sparrow has the most remarkable characteristics of song of any bird that sings.

Every male Song Sparrow has seven independent songs of its own, no two having the same notes throughout, though sometimes, as if by accident, they may hit upon one or more of the same.

Six years ago this spring, I first made the discovery. A singer that had taken up his residence in my garden, attracted my attention by the sweet variations of its songs, so I commenced taking observations on the subject. I succeeded at last in remembering all his songs, which are at this day as fresh in my memory as any of our common airs that I am so fond of whistling. On one occasion I took note of the number of times he sang each song and the order of singing. I copy from my journal, six years back.

No. 1, sang 27 times, No. 2, 36 times, No. 3, 23 times, No. 4, 19 times, No. 5, 21 times, No. 6, 32 times, No. 7, 18 times. Perhaps next he would sing No. 2, then perhaps No. 4 or 5, and so on.

Some males will sing each tune about fifty times, though seldom; some will only sing them from five to ten times. But as far as I have observed, each male has his seven songs. I have applied the rule to as many as a dozen different birds, and the result has been the same. I would say that it requires a great degree of patience, and a good ear to come at the truth of the matter; but any one may watch a male bird while singing, and will find he will change his tune in a few minutes, and again in a few minutes more.

The bird that I first mentioned came to the same vicinity five springs in succession, singing the same seven songs, always singing within a circle of about

twenty rods. On the fifth spring he came a month later than usual; another sparrow had taken possession of his hunting grounds, so he established himself a little one side. I noticed that he sang less frequently than of old, and in a few days his song was hushed forever. No doubt old age claimed him as a victim. In other cases I have known a singer to return to the same place two, three and four years. But frequently, not more than one. I think there is not a more interesting or remarkable fact in natural history than the one I have related, and it is a fact you may confidently believe.

CHARLES S. PAINE.

East Randolph, May, 1856.

For the New England Farmer.

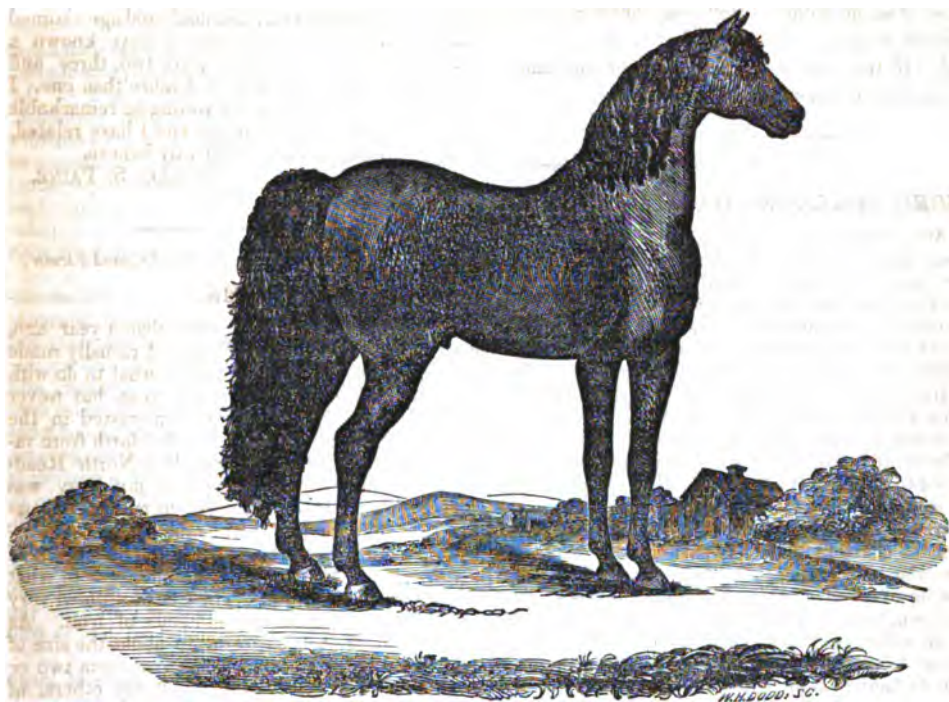
PLUMS.

MR. BROWN:—A little more than a year ago, in writing a piece for the *Farmer*, I casually made the inquiry respecting plum trees—what to do with those that blossomed fully every year, but never matured any fruit. I was quite interested in the opinions and remarks which it called forth from various correspondents—particularly a North Reading correspondent. Your reply to my query was to cut off the ends of the limbs—to mulch and manure well. Well, I did so. The mulching and manuring I had done several times before. The large tree is a sound, thrifty one; but I do not know of what kind. Now for the results. The tree blossomed very full, as usual; and set an abundance of fruit. As soon as the fruit had grown to about the size of small peas, I scattered fine ashes over them two or three times a week, as well as all my others, of which I have quite a variety. I soon found evidence that the curculio had found my plums, for they began to drop off, for the crescent mark was to be seen, and the white grub at the heart. I then had recourse to jarring them upon a white sheet. These two remedies I continued to use, till not more than one-half dozen plums remained upon the tree I am speaking of. The last of them, when they dropped, were about as large as good sized English walnuts. If I had succeeded in getting ripe fruit from that tree, I had intended to send you a box of it to pay for your advice. You say, in your editorial of May 17th, that you will be content with “one-tenth of the fruit saved by the cheap and simple remedy” of sifting ashes. Now as I saved *nothing*, what would your share be? *One-tenth of nothing?* Well, so soon as I get it divided you shall have your share; till then, you will have to accept my thanks, in lieu of plums. But I am not discouraged yet; I shall “try again.” By-the-way, a single scion that I set last year grew only some four or five inches less than twenty feet, last year, and is alive and doing well at this time. The scion, I believe, is of the Bradshaw plum, and was set in a Canada stock. Can any of your readers beat that?

J. T. W.

Marlboro', N. H., 1856.

REMARKS.—If we get *one-tenth* of the plums saved this season by sprinkling ashes, plaster and lime upon them, we shall need the largest stall in Quincy Market to hold them. Does “J. T. W.” mean twenty inches, instead of twenty feet, that grew in one year?



NORTH STAR MORGAN.

The Morgan horses have attracted a good deal of celebrity. They are compact, round, usually weighing from ten hundred to eleven hundred and fifty pounds, and are rarely excelled as horses for all work. They are excellent roadsters, when used for road service, as they have a graceful and commanding carriage, are sure-footed and good-tempered.

The horse represented above is six years old, of a light bay color, legs nearly black, with a glossy coat lying upon a flexible skin. His chest is broad, eye pleasant, mane heavy, tail flowing and well set. He is owned by Henry Olmstead, of East Hartford, Conn.

FEED FOR COWS AND PIGS. The cheapest food for pigs through the season that we know of, is tender young clover, refuse or sour milk, and in autumn, the dropping fruit of an apple orchard. Practical farmers differ as to the propriety of cutting clover and soil. One of the most skilful farmers in Western New York thinks it decidedly best to shut up his pigs, and cut and feed the clover to them, alleging, from his own experience, that running about a pasture wastes more value of flesh than the cost of soiling. Others have given a different opinion, but these may not have fed their pigs reg-

ularly, nor provided them with the necessary comforts of a close pen. Certain breeds may also be better adapted to confinement than others. We should like the results of accurate experiments on this subject. A crop of peas may be found advantageous as food for hogs.

For the New England Farmer.

"MIXING OF POTATOES."

MR. EDITOR:—Having read an article in your paper from Mr. Blake, of Ashfield, with which I cannot agree, I am induced to say a few words to him, and while doing so, to the rest of your fifty thousand readers. He takes the ground that potatoes will mix when planted side by side—that is, that the color of the tuber, as well as form, will be changed by growing together. Now, how is this to be done? In proof of his position, he says he takes his different sorts of corn in the spring and plants in the same field, and at harvest he finds three or four, and perhaps more colors on the same ear.—All very true, plant different sorts of corn together, and if they flower at the same time, they will be almost sure to mix, so that the seed will be affected; but does your correspondent remember that the tuber is *not* the seed of the potato. As well might we say that tulips, or any other bulbs, by standing in the same bed with others when in bloom, would

be so affected as to lose their identity, and produce the next year a flower of another color and form. But is this ever the case? In the seed you will see the effects of their proximity. So with dahlias as with potatoes, who ever heard of the bulbs or tubers being changed by standing near others? I have had a hundred sorts planted out together year after year without the slightest change having taken place, but "like produced like," and will continue to, till the last great trumpet blows. That the seed of these dahlias would have produced varieties very unlike, and have shown the effects of standing with other sorts, I grant. The position the gentleman takes will lead him into innumerable difficulties from which he will find it hard to extricate himself, because according to his theory the fertilizing matter, or pollen, has such an influence as not only to change the flower, (or rather the seed from the flower,) but exerts an influence on stock and root so that we might expect a Baldwin apple tree would be so wrought upon that it might produce Russetts, or Hubbardston Nonsuch, the next year. I trust that every person acquainted with vegetable physiology will see the fallacy of such reasoning. Again, he says, in proof of his position, that he planted Jenny Lind potatoes, and they changed color; does not the gentleman know that some varieties are not fixed, but constantly sport in this way. I, too, have the Jenny Lind potatoes and though most of the potatoes are a light red, yet some are perfectly white; some other sorts do the same, but it is not owing to being planted together, they would do it if planted a hundred miles from any other sort. I know a seedling Camellia, belonging to Messrs. Hovey & Co., of Boston, that produces four or five different colored flowers, and would do so if transplanted any distance you please from all other plants of that class. Dahlias and many other things sport in the same way. I pretend to know something of potatoes, having for the last few years planted many sorts, and that too in the same field, and with the closest observation I have never been able to detect anything like the tubers mixing through the flowers. This year I have planted sixty-six kinds in the same field, a row of each, and I am willing to risk my reputation in saying, that "like will produce like" in color, form, quality, and everything else.

J. F. C. H.

Newton Centre, May 31st, 1856.

ABOUT TREES.—The attention of the reader is particularly called to the proposition of our able correspondent WILSON FLAGG, Esq., to deliver two Lectures on "The Relation of Trees to the Atmosphere and Climate." It is a subject little understood—we are glad to find it in such able hands, and hope the services of the lecturer will be secured by most of the towns in the State. He will make the lectures interesting and profitable to any audience.

THE OHIO VALLEY FARMER, is a new paper, just issued at Cincinnati, by Messrs. CROPPER & BROWN. It is in quarto form, monthly, at \$1 a year. Its pages are well filled, and the salutatory, by the editor, B. T. SANFORD, is of the right sort. Success to the enterprise.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 14.

NORTHERN COUNTIES.

LANCASHIRE, YORK, DURHAM, WESTMORLAND, CUMBERLAND, NORTHUMBRIA.

The northern region, the last to come under our notice, before quitting England proper, commences with Lancashire, appended to which, and of the same character, is the West Riding of Yorkshire. Here, everything is on a large scale. Lancashire has an area of 1,200,000 acres, and a population of upwards of 2,000,000, which is nearly two per acre! The southern part of the county is the chief seat of manufactures, and the most densely populated, and Liverpool and Manchester cover it with their dependencies.

This is the most productive, and the dullest district in the world. Let any one fancy an immense morass, shut in between the sea on one side, and mountains on the other; stiff clay land, with an impervious subsoil, every way hostile to farming; add to this, a most gloomy climate, continual rain, a constant cold sea wind, a thick smoke shutting out what little light penetrates the foggy atmosphere, ground, inhabitants and dwellings covered with a coating of black dust,—a strange country; earth and air, in it, seem to be a mixture of coal and water. Such, however, is the influence upon agricultural production of an earnest market for its products, that these fields, so gloomy, are rented, on an average, at seven dollars and a half an acre; and, in the environs of the two cities, arable land lets at \$20 the acre.

At one time, Lancashire was a county of large property, and large farming; large property still remains, but farming is more divided with the increase of population. Even in the midst of this dense population, room is found for a number of gentlemen's parks—much to the discontent of the Manchester school, who dislike to see these large tracts withdrawn from farming. An association has been formed, with Mr. Cobden at its head, which numbers thousands of adherents, and a large subscription, for the purpose of buying large properties and cutting them up into small lots. In fact, the opinions of this district are as democratic as those of New England. The repeal of the corn laws was the work of Manchester; yet Lord Derby, one of the most strenuous opposers of the measure, is one of the largest proprietors in Lancashire. At one time, he appeared likely to overthrow the repeal, as minister; but ended by confirming it. Before yielding, as minister, to the force of public opinion, he made up his mind as proprietor. He succeeded in averting any reduction of his rents, by using the great antidote, that universal remedy—drainage. His whole lands were under-drained, the farmers paying five per cent. on the outlay, in addition to their rents. Such is the effect of draining upon these clay lands, under that damp climate that every one profits by it, even Lord Derby, himself, in spite of himself. English farming was brought into competition with the farming of the whole world, by the repeal of the corn laws—proprietors met the competition by advancing still more capital to agriculture, in outlays for drainage. New England, when brought into competition with the Western States, in farming, has, so to speak, left her plow in the furrow, and moved into the

land of her competitors, instead of advancing more capital to her land.

The plan adopted in this county, for bringing bog or moss land into cultivation, is worth describing. First of all, deep trenches are cut at a distance of thirty feet apart, in which the tiles are placed; after that, vegetation on the surface is burnt, and the ground is broken up by several cross plowings. When the whole is well pulverized, marl is carried on, by means of a movable railway, and spread over the land, at the rate of 100 to 150 tons to the acre. During these operations, it frequently happens, that the ground is so soft that it is necessary to put planks under the feet of both men and horses to prevent their sinking. The land then receives a manuring of night soil and cinders, and is planted with potatoes; after this crop, which is usually a good one, the Norfolk rotation follows.

York is the largest county in England, containing 3,800,000 acres. It has been divided into three parts, called Ridings, each of which is larger than an ordinary county. The West Riding contains the great manufacturing towns of Leeds and Sheffield, the one as famous for its woollens, as the other for its hardware; and in such a neighborhood, agriculture must necessarily flourish, and rents and wages rule higher than the average. The land is nearly all in grass, and like all districts, where the population is great, dairy farming, and the fattening of cattle, are the chief occupations. Many farms are below twenty acres, cultivated by journey-men weavers, who add the produce of the farm to that of the loom.

The East Riding is quite different from the West, without manufactures, no large towns, no small farms, the country is exclusively agricultural, and large farming reigns supreme.

The North Riding is the beginning of the mountainous region. It contains some fertile valleys, but the whole is a vast table-land of about 400,000 acres, 1500 feet above the level of the sea, called the Yorkshire moors. Human ingenuity has discovered a way of turning these poor lands to good account. Both hill and valley are almost entirely in pasture, and the stock reared upon them, horses, oxen and sheep, are held in great repute. The best English carriage horses are bred here; the sheep of this region, a distinct race, improved after Bakewell's principle, supply the markets of the north. Of cattle, the largest number are the short-horned breed. There are, perhaps, half a dozen breeders of them, who have, to a certain extent, a monopoly, and spare neither expense nor pains to keep up and improve their stock—often selling their bulls at from \$1000 to \$2000.

Durham is a small county, whose principal wealth consists in coal mines; the inexhaustible produce of which is exported from Newcastle, and other ports. Clay lands, with their usual difficulties, predominate. The average extent of farms is 60 acres, the farmers of which are, generally speaking, common laborers, who do everything for themselves, and are not rich enough to lay out much upon the land.

Westmoreland is also a small county, and its name—*land of the west moors*—indicates the character of the soil, while it is the most mountainous, the most uncultivated and thinly peopled part of England. The valleys of Eden and Kendall have a rich agriculture amidst this land of lakes, this

Switzerland of England, so celebrated by the poets.

Cumberland also is mountainous, and crowned, in the south-east, with the high peaks of Seafell, Helvellyn and Skiddaw. The history of this county is very instructive, and confirms the truth, that farmers, even proprietor farmers, who adhere to old usages, and despise skill and capital in farming, will run out and disappear from the land. At one time, a population of small proprietors, called Statesmen, dwelt in this county, each family possessing from fifty to a hundred acres. Probably they owed their origin to the necessity of defense against the invasion of Scottish marauders. You will find their mode of life pleasingly described by Wadsworth. But, as time went on, they adhered to their old usages, their want of ready capital, and want of skill rendered the land unproductive in their hands; and debts, from one cause or another, accumulated on their small properties, and swallowed them up. On the very lands where these *lairds*, as they were called, could not get a living, with no rent to pay, a rent-paying farmer, with a little money, and more skill, now flourishes. Nothing can stop a decay of this kind.

No English nobleman, and but few Englishmen, can be convinced that any other than large farming can be made profitable. Sir James Graham owns a large property in this county, called Netherby, of 30,000 acres. In 1820, this property contained 340 farms, averaging 90 acres each. The starting point of Sir James, in the improvement of this property, was to reduce the number of farms upon it to sixty-five, and retain only those farmers who had capital, skill and energy. He spent, also, considerable sums in draining his lands, on which outlays the farmers paid him five per cent., in addition to their rents. He improved his property and rents; but two hundred and seventy farmers and their families must have discussed and settled all the sad questions which pertain to the breaking up of home, the change of pursuits, and to emigration. That cannot be a good system which breeds such questions.

Nowhere does one realize the necessity and benefits of draining, as he does in these northern counties. And this is attributable to two causes; the clayey nature of the soil and the subsoil, and the great abundance of rain. In London, the amount of rain that falls, in a year, is twenty inches; in Lancashire, forty; on the coast of Cumberland, forty-seven, and in the lake district of Cumberland, in the high valleys, one hundred and sixty inches—a tropical amount of rain.

Northumberland is situated on the eastern side of the range of the British Appenines, as Cumberland is on the western side, and, like Cumberland, is divided into a mountainous district, and low ground. The mountainous part is mostly sterile; but the Cheviot hills support the race of sheep which bear their name; and some of the valleys are rich and excellent land. The agriculture of the Lowlands of Northumberland has a high reputation, which is just, only in respect to the light soils, which lie between the mountains and the coasts. The clayey district is not to be praised.

We have now finished our tour of England, the sovereign portion of three kingdoms—the sceptered isle.

If it is rich in its agriculture, I think our journey justifies my remark, that it does not owe the supe-

riority of its agriculture to the natural superiority of its soil, nor to its climate.

I think every observation we have made, on our way, justifies me in saying, that two cardinal things in agriculture are *capital and skill*.

I think the example of England shows, that agriculture cannot be rich in crops unless it is rich in live stock, cattle, sheep, horses and pigs; because live stock, by their manures, are the causes of crops, and are also the consequences, or results of the crops which feed them.

I think we have seen that no breeds of sheep, cattle or pigs can be profitable, or as profitable as breeds which are precocious, or early fit for the butcher, and which yield the greatest quantity of meat at the earliest age; and that a selected breed of milch cows is more profitable than such breeds as we may happen to have.

I think we have seen that England has profited by a fixed rotation of crops, so far as to make it, at least, an open question, whether other countries may not profit by a similar one.

Other things our journey has suggested; but these things especially.

Some of these conclusions it behoves us to ponder, if a statement contained in your paper of the 23d of February last be true, to wit: "By the returns made to the Patent Office, it appears that between the years 1840 and 1850, 300,000 acres were added to those, previously under improvement in Massachusetts, and, during that time, there was a reduction of 177,000 in the number of sheep and swine, in the State." I do not vouch for the truth of the statement, but you have published it. Unless other live stock have increased, and taken the place of the sheep and swine removed, here is an anomaly in our agriculture. More acres improved, and less live stock supported! Now every good farmer must see, that two facts must lie at the basis of our agriculture. The *first* is, that we cannot take many crops from our land, without exhausting it. The *second* is, that animal manure is the best agent for renewing the fertility of the soil. Therefore, we must apply ourselves to feeding the largest number of cattle possible. As our cultivated land increases, our live stock should increase, or all is wrong and awry. We have, in a large animal production, the butcher's meat, which northern people require, and the means of increasing the quantity of manure, the richness of the soil, and the production of grain and roots and grass. That Massachusetts agriculture is deficient in this respect, the number of animals, all will acknowledge; but if the patent office report be true, we are going backward, in our agriculture, unless it can be shown, that as we have diminished our sheep and swine, we have increased our other live stock.

M.

THE GRAPE AND STRAWBERRY.—We have before us a new book on the culture of the Grape and Wine-Making; by ROBERT BUCHANAN, with an appendix containing directions for the cultivation of the Strawberry, by N. LONGWORTH. Cincinnati, Moore, Wilstach, Keys & Co. This work gives the necessary directions for the preparation of soil, planting, spring and summer pruning, culture, diseases, varieties, &c. Also, the process for making

vine. Several pages are devoted to a description of the cultivation of various kinds of the strawberry. For sale by J. Q. A. Warren, 119 Washington Street.

THE FARMER'S WIFE.

It is a common saying, and perhaps as true as it is trite, that one woman is worth two men on a farm. It is certainly beyond dispute that those branches of husbandry which come mostly within a woman's department are among the most profitable parts of the business. The dairy is a source of large profit, *if well conducted*. It would not be a remarkable cow that would give thirty dollars in butter yearly,—and with a dozen cows yielding at that low estimate, the farmer, with the addition of a garden and a hog, will very nearly have a support for a family. And this is in great part, from the care and labor of his wife. In the report of the committee on butter and cheese to the Hampden county agricultural society in 1848, it is said, the value of butter, according to the statistics of the assessors returned to the Secretary of the commonwealth for the year 1844, was nearly double that of all the sheep then in the State. It also exceeded the aggregate value of wheat, rye, barley, buckwheat and oats raised during the year.

The dairy, however, important as it is in the labors and profits of the farm, is not the only branch of rural economy which requires the care and labor of the wife. Poultry, though smaller in amount, is, in proportion to the expenditure, an object of much profit. And the domestic manufactures, wrought out by the spinning wheel, (for there are some left yet) loom, needle, and other modes and processes of woman's handiwork, are not inconsiderable.

All these labors are in addition to the house-keeping cares and duties, which alone are considered by the industrious wives of the city, to be quite sufficient for any woman.

The farmer's success depends very much on the industry and good management of his wife. It is in the power of the woman, at least, to do a large share in making up the yearly income of the farm, if she is not really quite equal to two men.

With a few good cows, and a wife who is skillful and careful in the management of the dairy, the farmer always has a safe dependence, even though the drought or depredating insects should somewhat diminish his crops. But the farmer's wife must not have too much required of her. Good, dry fuel, and plenty of soft water, should always be conveniently supplied, and all heavy and exposed work be performed by the farmer or his men. Then he will have a cheerful, tidy help-mate, who will bear up her end of the yoke in such an even, easy, and agreeable manner, as to make the domestic duties a source of contentment and bliss.

For the New England Farmer.

HOP VINES.

"Good evening, neighbor Robbins. Take a seat."

"Good evening, sir. Pen, ink and paper before you. I often find you thus occupied. I wonder what you can find to write about, so much."

"Yes, I sometimes employ a leisure hour in this way. I was just thinking I would write something for the *Farmer*. What shall I write about?"

"Well, there are so many subjects connected with agriculture, that I should think you could readily find something to write about."

"But, my dear sir, in the very fact that there are so many subjects, lies the difficulty. If there were but one or two subjects, one would never be at a loss what to write about. I suppose many a man has lived a bachelor all his life, because he could not make up his mind which one of the many pretty girls around him, he should select for a wife. If there had been but one or two girls in his neighborhood, he would have married long ago. Is it not so, neighbor R.?"

"Perhaps there is something in your suggestion. One would not like to offend all the rest, by selecting one who is no better than they are."

"Offend the rest! Do you believe the girls are so selfish as to be offended because a man chooses one of their number for a wife? No, no! They will like him the better for thus showing a proper appreciation of the value of the sex; and, besides, when one is taken off there is a better chance for the rest. Depend upon it, sir, the girls will never be offended when a man takes a wife. But what is that which you have in your hand?"

"A piece of hop vine."

"Let me see it. Perhaps this will do for a subject to write about."

"Write about a hop vine! I think if I were going to write, I would take some juicier subject than that. That must be a little too dry."

"The virtues of plants do not all reside in their juice, neighbor. Let us see. Here is the bark or outer covering, the bitter principle, the tannin and the coloring matter, the leaves and the young shoots, of which cattle are very fond. Now let us recollect what we have heard about the uses of hop vines."

In England, they are used instead of oak bark, for tanning light skins. The red vines are said to contain the most tannin. In Sweden, the stalks are successfully converted into strong cloth for sacking and bags for holding the hops. They are gathered in autumn, and soaked in water during the winter, and after being dried on stones, are dressed like flax. A coarse kind of paper has been made from them. They are used as binders for sheaves of grain. The prunings are cut into pieces, and stored for winter food for cattle and horses, which are very fond of them, their bitterness constituting them an excellent stomachic. The tender shoots of the hop may be used in the spring as a salad. In Flanders, the young shoots are used in the same way as asparagus. An extract is procured from the leaves and shoots that forms a dye for woollens, of a fine cinnamon color, and in France they are made to afford a permanent brown. All these uses are distinct from the hop itself, for which the plant is cultivated. Here, then, we have tannin, cloth, paper, ropes, food for cattle and men, medi-

cine and dye-stuffs, all from the hop vine. This is not so dry a subject, after all, neighbor! And, besides, from this subject, we may gather "food for thought." How many of the products of nature consist essentially of the same elements, and may be readily substituted in practical use, the one for the other. Here is a fruitful text from which an ingenious man might write a long sermon; herein are displayed the forecast and wisdom of the Creator. When the supply for man's wants is exhausted in one form, he finds it stored up in another form, and safely preserved for his use; as a general fact, man never learns the uses of material things any sooner than he is compelled by his necessities; and, sometimes he struggles a long time under difficulties, before he finds out the proper remedies, although they exist in abundance in the commonest objects that lie thickly scattered around him.

The Indians and Mexicans used iron ore to paint their bodies, and ornament the dressed skins of animals, and all the while used axes and chisels and arrow-heads of stone, because they had not learned to separate the metal from the oxygen which had converted it into rust. Oyster shells, clam shells and bones, were an incumbrance and a nuisance until their agricultural use gave them a commercial value. When we shall invent some process by which granite can be converted into fine powder like gypsum, it will become valuable as a manure for certain soils, and then we shall be able to make apple trees thrive on clay soils, as well as on gravelly loams. Straw, certain grasses and weeds, are now becoming valuable as materials for paper, and I have recently noticed that the stalks of the broom corn are being used for this purpose. The waste of the soap maker and tanner are now valuable as manures. So in a thousand instances, substances of the most promising appearance, and of no apparent value, have become the fruitful sources by which our wants and conveniences are supplied. The fact is, neighbor, nature has created nothing in vain. When we have discovered a new and important value in some common and hitherto worthless article, we are surprised that it was never thought of before. The most necessary and useful articles are the cheapest and most abundant, the world over, and in this fact the care and benevolence of the Creator are manifested. He has furnished the raw material, and left it to the ingenuity and industry of man to convert it into such forms as shall best contribute to his advantage and comfort. But I am not going to write a sermon, and so I will stop. I thank you, neighbor, for bringing in that piece of hop vine. If it has no other use, it has served to occupy us pleasantly for half an hour. Well, I shall hang up this dry hop vine, in some conspicuous place, just to remind me that there is nothing made in vain, and so good-night." J. R.

DEVON CATTLE.—We have received from SANFORD HOWARD, Esq., American Editor of the Devon Herd Book, a circular, stating that he is now collecting materials for a third volume, and inviting breeders to send him the pedigrees of all animals eligible for entry in the work. Mr. Howard has also sent us LEWIS G. MORRIS' 7th catalogue of pure bred domestic animals, to be sold at auction at Mount Fordham, N. Y., on Tuesday and Wednesday, the 24th and 25th of June, 1866.

For the New England Farmer.

A FEW WORDS ABOUT PEARS.

I am much pleased, Mr. Editor, with your plan of giving pictorial representations of different varieties of fruit—particularly pears. The picture of the old St. Michael, in the *Farmer* of May 24, was so true to life, that I could almost taste the flavor of it. You say truly that the St. Michael has "many names," but I think you are mistaken in supposing that it is called, in New York, the "Vergalieu." As far as my knowledge goes, the Vergalieu, in New York, is identical with the pear of the same name raised in New England, and throughout the West, and which differs materially from the St. Michael, though, like that, it has many synonymes. The Virgalieu, or "Virgouleuse," was one of the first pears ever imported into this country from France, where it was not only called by the name it bears here, but also by those of *de Glace*, *Bezi Royale*, *Chambrette*, &c. This fruit is still, I understand, to be found occasionally in the markets of Paris, but has very much deteriorated under the peculiar modes of French culture.—It grows well in western New York, and in the Western States, so far as my knowledge extends, but it has seldom succeeded well for any length of time here in Massachusetts. The same may be said of late years of the St. Michael, the wood of which cankers, and the fruit of which blasts and cracks when exposed to our east winds. In situations where it can be protected from these, I believe it can still be cultivated in perfection, and I am loth to suppose that this fine old variety is to be entirely given up, although I believe there are other varieties equally good and equally prolific. In Rhode Island and Connecticut it has been cultivated under the name of the *Garner* pear, but in France it generally goes by the title of *Doyenne Blanc*, or *Beurre Blanc*.

There are several comparatively new varieties of pears now coming rapidly into vogue here, among which I will mention the *Rostieza* and *L'Angolier*. The wood of the former is almost as dark as that of the Baldwin apple, and it grows very thriftily upon the quince stock. The fruit is small, though somewhat larger than the Seckel, equally high flavored, and the tree comes much earlier into bearing. The *L'Angolier* I have not yet tried, though I have reason to believe it will prove one of our very best varieties.

I saw in a recent number of the *Farmer*, an article from a nurseryman in New Hampshire, (Mr. Copp, of Wakefield,) on the subject of "double-working" the pear—that is, grafting or budding on stocks which have been already grafted or budded. The object of this is to obtain the fine varieties which are weak of wood upon stocks of those varieties known to be good growers. This has been tried pretty effectually by the French fruit-growers but I learn that it is now generally abandoned by them, as a practice which deteriorates both the tree and the fruit. Mr. Copp mentions the *Jargonelle* as a good variety for double-working, but I think he has fallen into the same error with many other nurserymen, and substituted the *Quisse Madame* for the *Jargonelle*. The latter is not vigorous, so far as I have knowledge of it, and I have seen it under a great variety of circumstances. So far as my experience goes, the very best grower upon the quince stock is the *Beurre d'Amaulis*, and on the

pear stock the *Beurre Diel*. If nurserymen are disposed to try the experiment of double working, either upon the pear or quince, I think they will find these two the best varieties for that purpose, though I by no means recommend the experiment, except in cases where fruit proves to be bad, as is the case with the *Beurre Diel* upon some wet and heavy soils.

In closing, permit me to say that I have seen the best exemplification of the growth of the different varieties of the pear upon quince stocks, in the extensive nursery of Mr. Geo. W. Wilson, of Malden. Whole rows of the *Beurre d'Amaulis*, *Rostieza*, &c., grow with extraordinary vigor and thrift, while rows of other varieties, budded at the same time and treated in the same way, make but a feeble and sickly appearance. I would give more for a look at the results of Mr. Wilson's thorough, live experiments, in budding upon the Angiers quince, than for whole hecatombs of newspaper speculations upon the subject of "double working."

Somerville.

E. C. P.

EXTRACTS AND REPLIES.

A BIG CALF.

One of my neighbors, Mr. Samuel Arnold, has a Durham cow which dropped a calf the 23d inst., that weighed 117½ pounds when 8 hours old.

Scarsmont, Me., May, 1856.

FREAK OF NATURE.

MR. BROWN:—Enclosed you will find proof that Mother Earth does not always bring forth fruit according to the common course of events, or ordinary expectations of men. Our farmers have too little faith in her promise to return a crop in proportion to the care bestowed upon her cultivation. The sample of wheat I forward you, is from a lot of seventy bushels, raised on one and three-fourths acres, by Horace Kingsbury, Warren, Vt., the last season. The above crop was sold for seed at \$3 per bushel, except a small lot which made 52 lbs. fine flour per bushel, without tolling. The above wheat was the Rio Grande. Mr. K. sows 8 or 10 acres this year.

P. J.

REMARKS.—The specimen of wheat sent us with the above is very fine—the kernels are large, clear, and handsomely shaped. Farmers purchase too much flour.

TRANSPLANTING EVERGREENS.

DEAR SIR:—I think I have seen it somewhere stated, that evergreens, such as the Fir, Balsam, and common White Pine, may be transplanted with success in June. Will you inform me through your paper respecting it, and if it is the best time.

Yours,

S. D. WHEATON.

Orange, May, 1856.

REMARKS.—Transplant evergreens any time, before they begin to grow.

BOG BRAKES.

Cut them off a little below the surface of the ground, with an old axe or hoe; they will seldom show their heads again, if done about the first of June.

C.

Brattleboro', Vt., 1856.

WATER LIFTER.

C. S., *Boston*.—We are expecting an engraving on the subject of raising water by the cow or ox who drinks, and when it comes, shall refer to the subject again.

THORN HEDGE.

Information wanted as to the best method of obtaining a thorn hedge—what the process, &c. Also, in regard to celery, when the seed is to be sown—what the process, &c. A SUBSCRIBER.

REMARKS.—Hedges are produced by setting the plants—which may be purchased at the nurseries—in good soil, finely pulverized. The process given below is from an article by our associate editor, Mr. FRENCH, published originally in the March number of the *Farmer* for 1852.

"My land being light and sandy, I threw out the earth, forming a trench about three feet wide, and eighteen inches deep, filled it up with turf and soil about half full, and the rest with good soil and compost manure, about half and half. I set my plants on the trench, ten inches apart in a single row, in April or May, and cut them down to within four inches of the surface. I keep the land light and free from weeds, and cut the plants every autumn, so that they gain but six inches height each year, the main object being to get the hedge thick at the bottom. Some of my plants I have cut twice, once in Summer, and once in Fall or Spring. I am not decided whether they should be cut once or twice. My plants grew the first year about two feet, and afterwards they have made shoots three feet long, when not stopped, in Summer."

BRANDON PAINTS.

Will some one inform "A Subscriber," where Brandon paints may be obtained? Whether they are durable, what their cost is, and whether they are in various colors?

AFRICAN MARROW SQUASH.

T. A. S., *South Danvers, Mass.*—Will make fair trial of the squash seeds kindly sent by you, and report success.

WHAT AILS MY COW?

"J. H." says he has no doubt it is eating too much salt food—that is, hay salted and fed too liberally.

THE STRIPED SQUIRREL.

A. M., *Concord, Mass.*, is of the opinion that the striped squirrel carries away the earth in his mouth, which he displaces when digging his hole.

"N." may find the book he desires at F. S. SEXTON'S, 81 Washington St., Boston.

FARM STOCK IN THE UNITED STATES.—It is said that there were estimated, two years ago, to be within the United States more than twenty millions of horned cattle, more than twenty millions of sheep, and more than thirty millions of swine.

UNITED STATES AGRICULTURAL SOCIETY.

The Fourth Annual Exhibition of the UNITED STATES AGRICULTURAL SOCIETY will be held at Powelton, (Philadelphia,) on Tuesday, Wednesday, Thursday, Friday and Saturday, October 7th, 8th, 9th and 10th.

The first exhibition of this Society, held at Springfield, Mass., 1853, was devoted exclusively to an examination of horses;—at Springfield, Ohio, cattle alone were exhibited; in Boston, 1755, all departments of farm stock, cattle, horses, sheep and swine, were shown.

The Society, encouraged by past success, and by the approbation of the agricultural community, now propose to offer premiums, not only for domestic animals, but also for poultry, and the products of the fruit garden, the grain field and the vineyard, and for agricultural implements and machinery.

Premiums from twenty-five to two hundred dollars, amounting in the aggregate to over twelve thousand dollars, will be offered for the various classes of domestic animals, fruits, American wines, vegetables, grains, and agricultural implements and machinery.

A local committee of forty-seven citizens of Philadelphia, representing the various branches of industry, has already been appointed to co-operate with the officers of the Society in perfecting arrangements for the exhibition; and fifteen thousand dollars have been guaranteed to meet expenses. This material aid, coupled with the excellence of the selected location, and the large amount of premiums offered, induces the expectation that the exhibition of 1856 will be superior to any of its predecessors.

Favorable arrangements for the transportation of stock, and other articles, will be made with the various railroads.

The list of entries, the awards of premiums, and proceedings, will be published in the Journal of the Society for 1856.

The premium list, with the regulations and programme of the Exhibition, will be furnished on application to Mr. JOHN MCGOWAN, Assistant Secretary of the United States Agricultural Society, 160 Chestnut Street, (rooms of the Philadelphia Agricultural Society,) or by addressing the Secretary at Boston.

MARSHALL P. WILDER, President.

WILLIAM S. KING, Secretary.

June 1st, 1856.

A RAILROAD INCIDENT IN AMERICA.

I had found it necessary to study physiognomy since leaving England, and was horrified at the appearance of my next neighbor. His forehead was low, his deep-set and restless eye significant of cunning, and I at once set him down as a swindler or pickpocket. My convictions of the truth of my inferences were so strong that I removed my purse—in which, however, acting by advice, I never carried more than five dollars—from my pocket, leaving in it only my handkerchief and the checks for my baggage, knowing that I could not possibly keep awake the whole morning. In spite of my endeavors to the contrary, I soon sank into an oblivious state, from which I awoke to the consciousness that my companion was withdrawing his hand from my

pocket. My first impulse was to make an exclamation; my second, which I carried into execution, to ascertain my loss, which I found to be the very alarming one of my baggage checks—my whole property being thereby placed at this vagabond's disposal; for I knew perfectly well that if I claimed my trunks without my checks, the acute baggage-master would have set me down as a bold swindler. The keen-eyed conductor was not in the car, and had he been there, the necessity for habitual suspicion, incidental to his position, would so far have removed his original sentiments of generosity as to make him turn a deaf ear to my request; and there was not one of my fellow-travellers whose physiognomy would have warranted me in appealing to him. So, recollecting that my checks were marked Chicago, and seeing that the thief's ticket bore the same name, I resolved to wait the chapter of accidents, or the reappearance of my friends. • • •

With a whoop, like an Indian war-whoop, the cars ran into a shed—they stopped—the pickpocket got up—I got up, too; the baggage-master came to the door. "This gentleman has the checks for my baggage," said I, pointing to the thief. Bewildered, he took them from his waistcoat pocket, gave them to the baggage-master, and went hastily away. I had no inclination to cry, "Stop thief!" and had hardly time to congratulate myself on the fortunate impulse which had led me to say what I did, when my friends appeared from the next car. They were too highly amused with my recital to sympathize at all with my feelings of annoyance, and one of them, a gentleman filling a high situation in the east, laughed heartily, saying, in a thoroughly American tone, "The English ladies must be 'cute customers, if they can outwit Yankee pickpockets."—*The Englishwoman in America.*

PRUNING.

The object in pruning, generally, is not to make the tree assume a form foreign to its nature, but, in this country, to relieve it of a redundancy of growth, and to take away those parts which interfere with each other, and which may, if suffered to remain, endanger the whole condition of the tree at some future time. In England, where the climate is damp and the sun often obscured, they shape the tree to relieve it from these unfavorable influences, giving it a broad, open head, where the sun, when it does shine, may be freely admitted as well as the air. In this country, where sun and air are hot for two or three months, somewhat dense heads are unobjectionable, provided the limbs do not chafe each other, and the soil is sufficiently rich to sustain a liberal amount of limbs and leaves.

The Baldwin, for instance, unchecked, will form a thick, compact top, the Northern Spy prim and slender, and running up freely for the first six or eight years, while the Rhode Island Greenings and most of the sweet apples will spread themselves widely on every side, or assume the whip-lash form, with few leaves except on the extremities of the branches. It ought to be clear to all, that these varieties should receive different treatment in

pruning. No single rule will be applicable to all trees.

The *form* of fruit trees should be decided in the nursery; that is, the limbs should be set by the nurseryman where they ought to remain, so that after being transplanted there shall be no cutting of the main branches. But as there are different tastes in this matter, the limbs may be allowed to come out at different heights from the ground, ranging from three feet to five feet, and in this range all customers may be suited. Where trees are started in life in this manner, there is really very little pruning to be done. With a sharp key-hole saw, a good knife, and a quick eye, one may do all that is required to 200 young trees that have been well tended in half a day.

The principal amount of pruning that is to be done is upon old trees, that have been badly treated, and trees that have been grafted. It is customary to set two scions in each stock, so that there may be a double chance of success, and as most of the limbs are usually taken off, if both scions live, the tree is crowded to excess with its new top. In such cases, one of the scions in each stock, after having grown one year, should be cut out and the wound carefully covered with wax. But this is generally neglected, the top is dense, confused, and unsightly,—and these are the cases where great skill and tenderness are required in pruning.

In performing this work, it is of the utmost importance as to what season of the year it is to be done. We think few persons have investigated this subject more, or had more practical experience in it, than ourselves, and yet our conclusions are contrary to those of several of our contemporaries. The orchardist must be a careful student of the habits and physiology of the tree. We believe that the theory presented in our columns by Mr. Groodrich, of Burlington, Vt., and by Mr. H. Curtis, in the *Rural Intelligencer*, Augusta, Me., is correct. It may do to take off a twig or quite small branch at any time, but it should be an inexorable rule, that *no limb larger than a pipe stem should be removed during the months of March, April or May.* There is not an old orchard in our knowledge in which we cannot point out an irretrievable mischief caused by *spring pruning*,—and point it out so clearly as to convince the most prejudiced mind, if it be a candid one.

Prune through the middle of June, and again after the leaves have fallen, in October and November, always covering the wounds with gum shellac dissolved in alcohol, paint, or something that will keep out the sun and air. Fill the cavities of old trees with clay and cow manure, thoroughly mixed, and you will find your labors abundantly repaid.

The whole subject is important, and suggests more points than we have time or space for at present.

ABOUT BUDDING.

The time in which budding is usually performed is from early in July to the middle of September; plums and cherries are among the earliest to be budded, and pears, apples and quinces the latest. If the season in July, or even in August, be very dry, budding had better be postponed until there are copious rains. Stocks, from a quarter of an inch to an inch in diameter may be budded, although those of an inch are more suitable for grafting. The buds should be selected from thrifty shoots that have nearly done growing.

Shield, or T budding, is the most approved mode in all countries, and is described by Downing as follows:



Fig. 1.—A stick of buds.

Having your stick of buds ready, choose a smooth portion of the stock. When the latter is small, let it be near the ground, and, if equally convenient, select also the north side of the stock, as less exposed to the sun. Make an upright incision in the bark from an inch to an inch and a half long, and at the top of this make a cross cut, so that the whole shall form a T. From the stick of buds, Fig. 1, your knife being very sharp, cut a thin, smooth slice of wood and bark containing a bud.—With your budding knife, now raise the bark on each side of the incision, just wide enough to admit easily the prepared bud. Taking hold of the footstalk of the leaf, insert the bud under the bark, pushing it gently down to the bottom of the incision. If the upper portion of the bud projects above the horizontal part of the T, cut it smoothly off now, so that it may completely fit. A bandage of the soft matting is now tied pretty firmly over the whole wound, commencing at the bottom, and leaving the bud, and the footstalk of the leaf only exposed to the light and air.

Common shield-budding, Fig. 4, practised in all gardens in Europe, differs from the foregoing only in one respect—the removal of the slice of wood contained in the bud. This is taken out with the point of the knife, holding the bud or shield by the leaf stalk, with one hand, inserting the knife under the wood at the lower extremity, and then raising and drawing out the wood by bending it upwards and downwards, with a slight jerk, until it is loosened from the bark; always taking care that a small portion of the wood remains behind to fill up the hollow at the base or heart of the bud. The bud thus prepared is inserted precisely as before described.

The American variety of shield budding is found greatly preferable to the European mode, at least for this climate. Many sorts of fruit trees, especially plums and cherries, nearly ma-

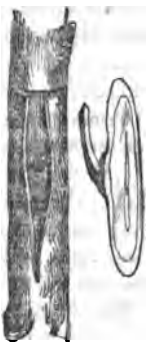


Fig. 2.—American Shield Budding.

ture their growth, and require to be budded in the hottest part of our summer. In the old method, the bud having only a shield of bark with but a particle of wood in the heart of the bud, is much more liable to be destroyed by heat, or dryness, than when the slice of wood is left behind, in the American way. Taking out this wood is always an operation requiring some dexterity and practice, as few buds grow when their eye or heart wood is damaged. The American method, therefore, requires less skill, can be done earlier in the season with younger wood, is performed in much less time, and is uniformly more successful. It has been very fairly tested upon hundreds of thousand fruit trees, in our gardens, for the last twenty years, and, although practised English budders coming here at first are greatly prejudiced against it, as being in direct opposition to one of the most essential features in the old mode,

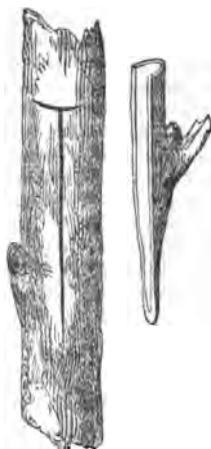


Fig. 4.—European Shield Budding.

When budding has been performed very late, we have occasionally found it an advantage to leave the bandage on during the winter.

As soon as the buds commence swelling in the ensuing spring, head down the stock, with a sloping back cut, within two or three inches of the bud. The bud will start vigorously, and all "robbers," as the shoots of the stock near to and below the bud are termed, must be taken off from time to time. To secure the upright growth of the bud, and to prevent its being broken by the winds, it is tied when a few inches long to that portion of the stock left for the purpose, Fig. 5. About mid summer, if the shoot is strong, this support may be removed, and the superfluous portion of the stock smoothly cut away, when it will be rapidly covered with young bark.



Fig. 3.—Bud Bandaged.

yet a fair trial has never failed to convince them of the superiority of the new.

After treatment.—In two weeks after the operation you will be able to see whether the bud has taken, by its plumpness and freshness. If it has failed, you may, if the bark still parts readily, make another trial; a clever budder will not lose more than 6 or 8 per cent. If it has succeeded, after a fortnight more has elapsed, the bandage must be loosened, or if the stock has swelled much, it should be removed altogether.



Fig. 5. Treatment of the growing bud.

☞ New white wheat of the first quality is arriving at Augusta, Georgia.

THE CLIFF SWALLOW.

A beautiful story is going the rounds, taken from an old number of the Greenfield (Mass.) *Advertiser*, of the Cliff Swallow, which species has recently made its appearance, and begun to make settlements under the eaves, in Delaware county, Pa., its nest being in the shape of a retort with a long neck.—The story referred to is of one of these swallows, which was seen to linger after the tribe had taken its usual flight to the tropics, apparently alone, through the autumn and winter. The following is the explanation:

Spring came, and he was there. An occurrence so singular, and contrary to the habits of the migrating tribes, caused his motions to be watched with more attention. At length another head was observed protruding from one of the nests, which seemed to be the abode of the bird which had been remarked with so much interest. On examining the nest the mystery was beautifully solved. Another swallow was found there a prisoner.

One of its legs had become entangled by a thread of hair, which had been used in the lining of the nest, and held it there a captive. Yet it was not deserted by its faithful mate. Through all the long and dreary winter, this patient self-devoting love supplied her wants. He saw without regret, but for his hapless consort, the deepening gloom of the fading year; he felt without feeling, but for her, the advancing rigor of winter; and if he, at times, remembered the sunny skies of the South, and the pleasures his tribe were then enjoying, it was only to sigh that she could not partake of them. By night and by day, in sunshine and in cloud, in the calm and the tempest, he was with her, ministering to her wants, and cheering the hours of her hopeless captivity by his caresses and untiring devotion.

CANKER WORMS.

Boston, May 28th, 1856.

TO THE EDITOR OF THE EVENING TRANSCRIPT.

DEAR SIR:—There was, last year, under date of June 21st, published in your paper, a letter from William Plumer, Esq., of Lexington, in relation to certain experiments made by him for the destruction of the canker worm, since which time several persons have expressed a doubt of its effects, having tried it at a much later season of the year, and after the worm had gone into the ground. Under these circumstances, I requested Mr. P. to state the time and mode of trying the experiments, and the following communication is his answer to the same.

Please publish this in your valuable journal and oblige

Your most obedient servant,

70 State Street. JAMES GOULD.

Lexington, May 27th, 1856.

JAMES GOULD, ESQ.:—Dear Sir,—I take pleasure in again stating, at your request, the means I used some years since to destroy the canker worm, by the application of your muriate of lime. And I do this the more willingly, because I understand there has been doubt expressed by some in regard to the correctness of my former statement.

The facts are as follows: that I caused the ground to the extent of the branches, under the trees in question, to be covered from a quarter to half an inch deep with the muriate of lime. I then gently shook the tree, and found, that in every case,

where the worm fell on the lime it was destroyed; in some cases the worm would spin himself up several times, but finally would drop, curl up and die. The next season, not a worm was to be seen, nor has there been one since. Of course, I then thought, and do now believe, that this was owing wholly to the use of the muriate of lime.

If others have tried the experiment and have not succeeded, I cannot help thinking that they did not use the lime at the right season, and in the right way; I believe it should be used at the very time, or rather a little before, the worm is leaving the tree and going into the ground. The worm is then in that state when he is weak, and can be easily destroyed. The time I think, is of the utmost importance when the muriate should be used, and the ground should be well covered. As I only made one experiment, of course I have no means of judging the effect of the lime when used at a different season or in a different way from the time or manner tried by myself.

As a fertilizer, your muriate is already too well known, and you have received testimonials from far better judges than myself, to require anything from me on that point.

Hoping that the above will be a sufficient answer to your questions, I remain yours truly,

WILLIAM PLUMER.

P. S.—The time I used the muriate in my experiment was, I believe, from the 10th to the 15th of June.

For sale by James Gould, 70 State St., or C. Young & Co., 118 State St.

EFFECTS OF HEAT UPON MEAT.

A well-cooked piece of meat should always be full of its own juice or natural gravy. In roasting, therefore, it should be exposed to a quick fire, that the external surface may be made to contract at once, and the albumen to coagulate before the juice has had time to escape from within. And so in boiling. When a piece of beef or mutton is plunged into boiling water, the outer part contracts, the albumen which is near the surface coagulates, and the internal juice is prevented either from escaping into the water by which it is surrounded, or from being diluted or weakened by the admission of water among it. When cut up the meat yields much gravy, and it is rich in flavor. Hence a beef-steak or mutton-chop is done quickly, over a quick fire, that the natural juices may be retained. On the other hand, if the meat be exposed to a slow fire, its pores remain open, the juice continues to flow from within, as it has dried from the surface, and the flesh pines, and becomes dry, hard and unsavory. Or if it be put in cold or tepid water, which is gradually brought to a boil, much of the albumen is extracted before it coagulates, the natural juices flow out, and the meat is served in a nearly tasteless state. Hence, to prepare good boiled meat, it should be put into water already brought to a boil. But to make beef-tea, mutton-broth, and other meat soups, the flesh should be put into cold water, and this afterwards very slowly warmed, and finally boiled. The advantage derived from "simmering"—a term not unfrequent in cookery books—depends very much upon the effects of slow boiling, as above described.

These are the views of Liebig and Professor Johnston on cooking meat.

For the New England Farmer.

LETTER ABOUT NORTH CAROLINA.

Raleigh—Capitol Grounds—Lunatic Asylum—The Severe Winter—Care of Animals—Roads—The Southern Pine—Method of procuring Turpentine—Probable extermination of the Pine.

Lexington, April 20, 1856.

HON. S. BROWN:—Dear Sir,—It is quite a long jump in time, as well as interval in space, between Weldon, N. C., Jan. 10th, and Lexington, Mass., April 20th. But time and convenience did not suffice me to write you again upon my Southern journey, and you will be obliged to content yourself with reminiscences.

When I wrote you from Weldon, I think I said little or nothing about Raleigh, N. C., the capitol of the State.

It is located, like a great many other State capitols, as near the centre as possible, without regard to business so long as it accommodates State purposes. The city is a mile square, and laid out in rectangles, each street being either north and south or east and west. The Capitol is a large stone building; its ground plan the Latin cross, and otherwise rather Greek in style, which ought to have cost about \$20,000, and did in reality cost not less than \$60,000; so are things done for states. When a state begins to spend and contract it is very likely to suffer financially.

Raleigh, as above said, depends upon the State business to support it, and is inhabited either by officials or men of wealth who like to be in sight of each other, for you know at the South, in the country, men are very apt to be a long way from sight of their neighbors. The city has appropriated several large squares for ornamental purposes, much in the same manner with Savannah,—none of which are as yet laid out and adorned; for the capitol grounds of about four acres, I made designs, but whether they will ever be executed depends upon the whim of a Legislature which may or may not be of the ornamental kind.

Here, too, is the first Lunatic Asylum in North Carolina. It owes its origin to the celebrated Miss Dix, who stuck to the North Carolinians till they appropriated the money. The building is very large and capacious and the grounds of three hundred acres very capable of improvement; for this too I had the honor and pleasure of prescribing, and I hope some day, under its efficient manager, Dr. E. C. Fisher, the estate will become as delightful as it ought to be. During the whole of our stay in Raleigh of a month, the ground was covered with snow and ice, and it hardly thawed the whole time, a condition of things that has not been known there before for thirty years at least. No man, accustomed to our care for cattle, could be here during such weather without suffering every time he went out, at the sight of the poor half or wholly starved creatures, deprived of their accustomed forest and town pickings and stealings by the snow, and for whom their masters neither had made nor could make any provision.

As no summer supply is laid in against the winter, when it comes with its cold and snow, the animals have to suffer. It seems incredible that in the South, to which we have been accustomed to attach ideas of warmth and comfort, we should suffer more from the cold than at home during ever so severe a winter as the past, but such is the lack of winter comforts, that it is literally true. I have sat

for days in a room in a Southern hotel where all the fire I could make would not warm the air for ten feet around it.

Nor in such times do the beasts of burden suffer less. The roads are never made; they get a road by selecting the direction in which it is to run, and then dig some of the earth off the hilly places and cart it, with brush to keep the loam out of the water, into the low lands to fill up, and without the least care for ease of grade, or side drains for the removal of standing or spring water, consider the road made. Nor do they in numerous instances take even this pains; for it will more often be found that no digging has been done at all, but the line being selected, the people drive over it anywhere within ten rods, and suit themselves about the best place for animal and wagon, making a great number of tracks very confusing to a stranger, and not very desirable any of them. Where roads are so made they become mere canals for the passage of the water down the hill-sides, which settles in the hollows, and I have often in a few miles' drive, forded half a dozen ponds or streams that would rise above the hubs of the wheels. While the frost is coming out, such roads are absolutely impassable for loaded teams, and it is no rare thing for a carriage to get bogged even after a heavy rain. The badness of the road is also owing in some measure to the awkward, heavy, springless wagons in general use. It is well known to all those engaged in constructing roads, properly, that the wear and tear will be diminished one-third by the use of springs. Thus you see the miserable economy of this kind of management; the road is badly built, is always out of repair, is rendered worse by the vehicles being in their turn cumbersome and badly constructed, and as a result, demand the use of double or treble the team to haul them; cutting thus into the purse of the people, in a three-fold manner.

I mentioned in my last the manufacture of turpentine, &c., and how important it is to the States possessing the long-leaved pine. I did not, however, describe the method of making it. The long-leaved pine is a tree so unlike any Northern tree that it is almost impossible to describe it to the unbotanically scientific. It resembles our yellow field pine somewhat, but has leaves often twelve to eighteen inches long. These trees cover the sandy plains of South and North Carolina in millions, and yet at the present rate of consumption, must at no distant day entirely disappear; a plantation of these (by plantation, I mean the trees contained in any one plantation,) lasts about thirteen years from the time operations commence upon them, so that whilst they may be a source of profit to one generation, they will be lost to the next, thus killing the goose for the golden egg.

The process of working the crop is as follows:—a gash is cut into the tree near its bottom, hollowing below like a cup, but rising above to the outside of the bark; the turpentine, or sap of the tree, runs down and is caught in the cup; every few days a negro goes out and scoops out whatever has collected, and as the sap runs less freely, gouges or scores the trunk for a line perpendicular to the middle of the cup-shaped gash at bottom, out to a line perpendicular to the side of the same; of course, the sap runs out afresh at the new wound, and is collected as before. This process is continued on all sides of the tree, till it is exhaust-

ed; this is the crude turpentine, which is carried to the distillery and distilled, giving pure turpentine and rosin. The trees are then cut down and piled, as we pile for charcoal, over a hole in the ground, covered with earth, and then set on fire; during their burning there runs out into the hole in the ground another pitchy substance, tar. The Hard or Southern Pine lumber is derived from the same tree, cut before all this process has been passed through, though, sometimes, I believe the tree is used for lumber after the turpentine has been extracted.

Were it not for the practice of allowing the hogs to run at large in the forest, as I mentioned in my last, these trees would restore themselves, but the hogs eat the mast or seed, and the tree is thus fast disappearing; and countless as their numbers seem, no distant day will see the end of the Southern pine, unless the Legislatures of the respective States pass some forest laws restraining its destruction and promoting its growth.

Having thus described the North Carolina staple crop, I will leave the rice of South Carolina for a future number. I remain yours, &c.,

R. MORRIS COPELAND.

UTILITY OF MOLES.

Mr. George Wilkins, in the *Agricultural Gazette*, gives the following statement:—"The Journal of the Royal Agricultural Society affirms that in one year, and every year, full 60,000 bushels of seed wheat, equal at this time to nearly £30,000 worth, are destroyed by wireworms. If 60,000 bushels of seed are destroyed, full 720,000 bushels of crop are prevented, equal in value, at this time, to upwards of £300,000 a year! If farmers, instead of killing moles, partridges, and pheasants, would protect them, 720,000 more bushels of wheat would go every year into the English markets; but the creature designed by a kind Providence to perform the chief part of this immense good is the mole. Some years since I had two fields, one of which was full of wireworms, and the other was infested with them to the extent of more than one-third part of it. My crops failed for the first two or three years the land was in my possession, but every year afterwards they improved, and at length rapidly. The cause was this:—I bought all the live moles I could obtain, first at 3s. a dozen and then at 2s., and turned them down in my fields; and one year in which I had 8 quarters of barley on an acre and nearly 7 quarters of wheat, the moles were at work all the summer, and in such numbers that, as I walked among the growing crops, the ground under my feet was like a honeycomb; but that was the last year I had a mole on my land; their work being done, their food—the former pests to my crops—being all consumed, the little innocent workmen, who had performed for me a service beyond the powers of all the men in my parish, migrated to my neighbors to perform for them the same kind or benefit they had for me; but of course, death met them at every move, and soon the whole colony was destroyed. I will add that now I will allow all farmers in this country to turn upon the globe I myself occupy, all the moles from their farms they can bring, being convinced they would do me no injury; but, if I happen to have a wireworm, they would by destroying him do me good."

INDIA RUBBER IN A NEW SHAPE.

A New York correspondent of the *Boston Journal* gives the following account of a new application of India rubber, which promises to be of much importance to the world:

Among the recent applications of India Rubber, none are so remarkable as the manufacture of what is called "Hard India Goods," into which the rubber enters most largely. We have in this city a company called the Beacon Dam Company, which is devoted to the manufacture of this class of goods. By a process that originated with Mr. Chaffee, coal tar is mixed with the rubber, and the compound makes one of the most solid, elastic and elegant articles that can be found in the market. It resembles polished stone, is as black as coal, needs no finish, and has of itself a hard and exquisite polish as it is possible for any metal to bear. There seems to be no end to the articles into which it can be made. Canes of the most elegant form and appearance are constructed out of it, and are as tough as so much steel, while they have all the elasticity of whalebone. Cabinet work, inlaid and mosaic, ornamental to the parlor and the chamber. Spectacle bows and glasses for the eye, are made so light as to be no annoyance, while their elastic character cause them to sit firm to the head; opera glasses, castors, sand stands, ink stands, brushes for the hair, that cannot be harmed by hot water, tape lines, pen holders, pencil cases, cigar cases, government boxes for the army and navy, government buttons, and an endless variety of articles, are thus made, and the articles are of a most elegant character; syringes of a novel form and character; machines for oiling cars and engines, on a new principle, indicate that this new use of rubber is to work a complete revolution in the arts and manufactures.

But one of the greatest applications of this new rubber manufacture is the new telegraph wire that is made from it. It needs no poles, as it is laid in the ground. It needs no covering; a trench of a few inches is dug; the rubber telegraph wire is put in and covered up; the wire is enclosed with the rubber; no storm render the wires inoperative; no insect sever; no rust corrode. It would appear fabulous if I should state the miles of this wire that have already been engaged, and the goods cannot be made to meet the demand.

The government of the United States is now the best customer of the Beacon Dam Company. The call for the Navy and Army button is immense; the article is elegant; the naval button has on it the motto, "don't give up the ship." And so tough are these rubber buttons, that if one is placed on an oak plank and pressure applied, it can be sunk clear into the plank, and will come out unharmed; and the government shaving boxes, which are about three inches in diameter, are so strong that a man weighing 200 pounds can press his whole weight on one of them, and not break them. Gun handles, sword handles, and other military implements, are constructed from this material. They are cheap, elegant, enduring. A walk through the sales-room of this company is one of the marvels of New York, and if any of your readers have the least curiosity to see one of the most wonderful applications of India rubber that the world has ever seen, they can be gratified by visiting the wholesale

rooms of the Beacon Dam Company, located at No. 63 Maiden Lane, and they will be gratified. The Company retail no goods, but keep full specimens on hand, and the President of the Company, Col. I. H. Rich, so long known in Burlington, Vt. as one of the most enterprising of the citizens of that beautiful city, will show the curious, the marvels of this new trade.

"MUCK IS THE MOTHER OF THE MEAL CHEST."

No truth ought to be better established than this old homely one of the Scotchman, and yet, strange to say, comparatively few have yet received it in its broad signification; while a large majority reject it altogether. And, although no modern discovery has been of such essential service to the farmer as this, that *muck* is not only one of the best substances in nature to gather up and preserve for future use other valuable agents, but it is in itself a powerful fertilizer, many will not only refuse to avail themselves of its benefits, but discourage others from so doing.

Entertaining these views, we were gratified to find *Swamp Muck and Salt Marsh* the subject of discussion at the *American Institute Farmers' Club* in New York city, on Tuesday, the 15th of January. Mr. R. L. PELL, renowned as the most extensive fruit culturist in the world, and President of the club, was presiding. Mr. Secretary MEIGS read a paper from the *London Journal of Arts and Sciences*, upon a patent plan of preserving meats and vegetable substances used for food; and among the gentlemen present to whom we were introduced, were Judge LIVINGSTON, Mr. T. W. FIELD, of Brooklyn, a gentleman extensively engaged in pear culture, Dr. WATERBURY, of Conn., Mr. WYNKOOP, and others. Our friend, SOLON ROBINSON, the agricultural editor of the *New York Tribune*, was on the spot, pen in hand, which has enabled us to give below something that was said on the occasion.

Mr. FIELD, of Brooklyn, said all that was wanted to make swamps productive was to relieve the surface of stagnant water. The general use of muck, as commonly applied, has been deleterious, and it is difficult to induce men who have once made such a mistake to try again in a proper manner. But he finds nothing so valuable to mix with guano or potash, or any other concentrated manure, as decomposed muck. He supposes there is one-thirtieth part of this State now lying idle as worthless swamp. Here good garden land near New York is worth \$300 or \$400 an acre, and yet the swamps are everywhere lying idle.

There are millions of loads of muscles within a mile of Brooklyn, not one pound of which is ever used, while all around men are complaining of the failure of crops on light, sandy land.

Mr. BROWN, being called upon, said he found encouragement in thus meeting a farmer's club in

the heart of a great city; since, even in the country itself, the farmer's occupation and interest is neglected more than any other. It has never had the fostering care of government, or of large associations of men who had money to appropriate, or of testamentary donations, such as are every day made to colleges, libraries, and schools, but has been left to work its own way up against an accumulation of prejudice and ignorance which would have crushed any other calling than that upon which life itself depends. He therefore thought it a matter worthy of especial notice, that in a city like this, amid all the busy pursuits of life, a club of men can be found devoted to the purpose of discussing and bringing before the world such useful matters as emanate from this society; for however little they are studied in the city, they are widely read in the country, and commented, and acted on, by those most deeply interested. He had often republished the questions discussed in this room to the advantage and gratification of New England farmers. He thought the subject had been just called up, upon which Mr. Field had made some useful remarks, one that could not be talked about too much. The people need line upon line to awaken them to the importance of swamp draining, and the use of muck as a fertilizer.

On the subject of salt meadows, he said he thought their occupation by the farmers of western Massachusetts of doubtful utility. If the hay produced on them were used for litter, for mulching, for compost heaps, and the best of it as an agreeable change in fodder, and to enable the farmer to keep more stock than he could otherwise keep on his upland grass, it would then be a valuable acquisition to the farm. But wherever salt or marsh hay is accessible, two principles seem to have universally prevailed. *First*, to secure all that it has been found possible to obtain, and *secondly*, to carry away and sell all the best grasses of the upland farm. The time and labor expended in cutting much of the marsh grass was at the expense of the growing crops, so that short harvestings of corn and potatoes and roots were the common result. Ditching, draining, breaking up and re-seeding, and most of the improvements which ought to be annual on the farm, were pushed aside in order to permit all hands "to go to the marsh." The swamps near home were looked upon as valueless, or only served to keep the hills together, or were the impracticable right of the nocturnal serenaders, the frogs. And he thought now, that very few persons owning and improving salt marsh, had ever reclaimed a swamp, however near it might be to the buildings of the farm!

If this were all, however, he said, the error might be tolerated; but the evils of the second part of the drama are more disastrous than the first. The oxen, cows, horses and sheep are kept in a great

measure upon the salt hay, in order to save the English to sell, and this they will not constantly and freely eat, unless when kept down somewhere in the neighborhood of the starvation point. In consequence of this, their droppings are cold, watery and inert, and they generally remain through the year, neither fit for the dairy nor the shambles, enjoying nothing themselves, and a lean and gaunt reproach to their owners. Such is the system,—and instead of elevating the farmer and affording him a profit, its tendency is constantly to impoverish and discourage. The hardest working farmers he ever knew were those owning and cutting salt meadows.

As to the use of muck as a fertilizer, he thought comparatively few as yet properly appreciate it, or well understand its composition and powers, and the true way to use it. The muck of our swamps is a mixture of mineral and vegetable matter,—but principally the latter. It is formed by the growth of moss and annual grasses or rank aquatic vegetables, of dead leaves, rotten trunks, and branches of trees, where in some cases, a heavy vegetable growth has been burned and the ashes left, together with the refuse mould and mineral matter of the hills, washed down through long ages into the common receptacle—the swamp. Here then are the materials we need as fertilizers stored up for us in reserve like the coal beds, and waiting for light and air to become the food which our plants require. DANA says, it is highly concentrated vegetable food, and that when the state in which this food exists is examined, it is found not only partly cooked but seasoned. Peat ashes contain all the inorganic principles of plants which are insoluble. Twenty samples of peat examined by Dr. C. T. JACKSON, afforded an average of 72 vegetable matter, 24 ashes, in 100 parts dried. DANA also says—and he has had ample experience to enable him to judge correctly—that equal bulks of peat and cowdung do not materially differ; that the salts of lime are about the same, while the alumina, oxide of iron, magnesia in the silicates added to the salts of lime, make the total amount of salts, in round numbers, equal that of cowdung. That, “departing from cowdung and wandering through all the varieties of animal and vegetable manures, we land in a peat-bog. The substance under our feet is analyzed, and found to be cowdung, without its murky breath of cow-odor, or the power of generating ammonia.” The subject of muck as a fertilizer has received attention from many able minds in this country, and in England, and all accord in the opinion, that it is among the most valuable materials for increasing the fertility of the farm. Considering its nearness to the place where it is wanted to be used, and to the fact that it is a part of the farm itself, which was not paid for at the rate of \$50 per ton, it ought to

stand first in importance to the farmer, of all the fertilizers he uses,—or at least side by side with the droppings of his stalls.

Mr. Brown concluded by an earnest appeal to the farmer to experiment more carefully, and to use more extensively, and in so doing they would come to the conclusion that Muck is, in reality, the Mother of the Meal Chest.

For the New England Farmer.

GIFFORD MORGAN HORSES.

An inquirer in the last *Farmer* wants light on this the best branch of the Morgan race of horses.

The original Major Gifford was raised by Ziba Gifford, of East Randolph, Vermont, in the same neighborhood where the first horse ever known as “Morgan” was owned and kept, and I think, died, by Justin Morgan. (Hence the name “Morgan” was given the horse.) Major Gifford was a noble animal, and his stock is much sought after by breeders in the eastern part of Vermont. He was afterwards owned by C. Blodgett, Chelsea, Vermont, and thence taken to New Hampshire, (Walpole, I think,) and died at an advanced age. His stock is very generally of a beautiful chestnut color, very plump or well proportioned, often quite gay, and invariably possessing great power of endurance.—The old “Green Mountain” formerly owned by Silas Hale, of Royalston, Massachusetts, is of his sire, and though now at an advanced age, and by his excessive use is now unfit for trotting on the course, yet makes a fine appearance, and leaves abundant marks of his superiority of blood, in the splendid colts of his sire. He is now owned by a joint stock company of farmers in Williamstown, Vermont, and probably possesses the traits of “Major Gifford” as much as any other horse of the same stock.

There are “Gifford Morgans” in every section of New England, and in various places at the West, each claiming various degrees of kindred to old “Major Gifford” and like other horses claim to possess “*more Morgan blood than any other horse now living.*” “Major Gifford” was sired by the original “Morgan” mentioned above, and one of the four or five stock horses raised from a “Morgan.”

Ferrisburg, Vt., May 30, 1856.

P. J.

LOG HOUSES.—A correspondent of the *Boston Journal*, writing from Minnesota Territory, gives the following description of a superior style of log houses, which may interest persons going West:

“Nothing is less attractive in appearance than an ordinary log house, the logs being tumbled together as fast as possible, and then plastered over with mud. But give to a Swede the making of a house from logs, and he turns one out which makes it very doubtful to me whether it is not really the best house that can be made of wood. The reason of such a difference is, that in their own country, as they tell me, their houses of wood are never constructed in any other manner. With a few simple tools and principally the axe, they hew down the logs to a thickness of about five inches (making of them in fact a sort of plank) and then joint, pin and fit them together with a nicety which our best carpenters would find it hard to equal, and which

makes them as impervious to wind and cold as the walls of a well caulked ship. In the way of *rural architecture*, this is something we do not read of, but it is nevertheless as comfortable as it is unique, and in appearance even is behind no other way of putting wood together that I have seen."

EDUCATION BETTER THAN WEALTH.

Experience has often taught the lesson that the children of wealthy parents are ruined by their wealth, while children reared in abject poverty, by the stern discipline of their early years, acquire habits of application and energy and self-control, which qualify them for eminent success in the stern struggles of life. The following incident, referring probably to Judge Collamore of Vermont, is in point:

"I remember," says the late Postmaster General of the United States, "the first time I visited Burlington, Vt., as Judge of the Supreme Court. I had left many years before, a poor boy. At the time I left there were two families of special note for their standing. Each of them had a son about my own age. I was very poor, and these boys were very rich. During the long years of hard toil which passed before my return, I had almost forgotten them. They had long ago forgotten me.

Approaching the court-house the first time in company with several gentlemen of the bench and bar, I noticed in the court-house yard, a pile of old furniture about to be sold at auction. The scenes of early boyhood with which I was surrounded, prompted me to ask whose it was. I was told it belonged to Mr. J. 'Mr. J.? I remember a family of that name, very wealthy; there is a son too; can it be he?'

I was told that it was even so. He was the son of one of the families already alluded to. He had inherited more than I had earned, and spent it all; and now his own family was reduced to real want, and his furniture was that day to be sold for debt. I went into the court-house suddenly, yet almost glad that I was born poor. I was soon absorbed in the business before me. One of the first cases called originated in a low drunken quarrel between Mr. H. and Mr. A. Mr. H., thought I, that is a familiar name. Can it be? In short, I found this was the son of the other wealthy man referred to. I was overwhelmed alike with astonishment and thanksgiving; astonishment at the change in our relative standing, and thanksgiving that I was not born to inherit wealth without toil.

Those fathers provide best for their children who leave them with the highest education, the purest morals, and—the least money."

THE WINCONSIN FARMER, published monthly at Madison, by Messrs. POWERS & SKINNER, is an excellent paper—printed well, and its columns filled with practical and well written articles. It is a credit to the West.

HOWE'S SEED SOWER.—Only a single machine has been made; this is in the hands of practical farmers for thorough trial. Others will be manufactured as soon as one or two improvements which have been suggested can be more completely tested.

MANUFACTURE OF FISH GUANO.

At a late meeting of the Boston Society of Natural History, Dr. Charles T. Jackson, by request of one of the members, gave an account of the method now employed by the Narraganset Fish Guano Company, in the extraction of oil from Menhaden, and of converting the residual matter into a substitute for guano. We find the following report of his remarks in the *Traveller*:

He said that the manufacture of oil, and of artificial guano from fishes, had long been practised in France, where the fish called Merlan was employed for this purpose, and yielded but one and a half or two per cent. of oil; while the Menhaden is a much fatter fish and produces oil more abundantly. In France the fish cake, remaining after the extraction of oil, is dried at a steam heat, and is then ground fine and packed in air-tight casks for sale as a manure.

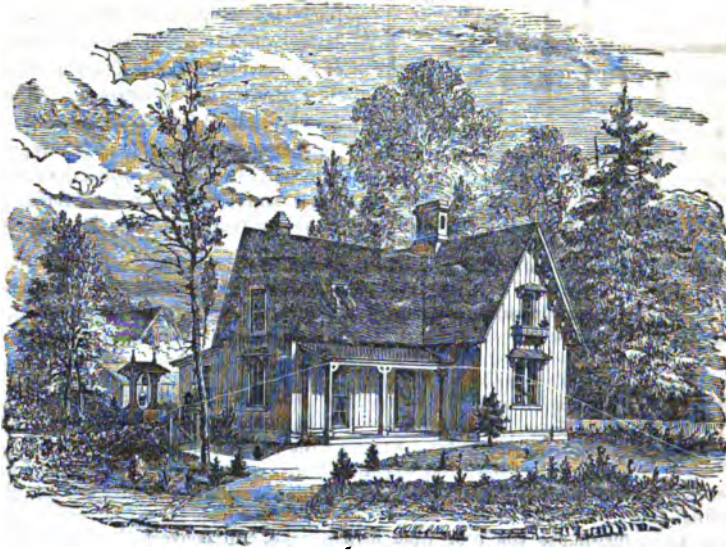
The Narraganset Company are engaged in similar processes, in the conversion of their fish cake into manure. They first steam the fish, then press out the oil, and afterwards dry and grind the remainder, mixing some gypsum, limestone, or earthy material, in order to render the grinding more perfect. Sometimes they add sulphuric acid to the fish cake, and convert the bones of the fish into sulphate of ammonia and humus, according to the method first indicated by Dr. Hare, of Philadelphia. In case this method is employed, the acid fish cake should be ground with limestone, when the excess of sulphuric acid will form sulphate of lime, and render the addition of gypsum unnecessary.

It has been proposed to add a certain proportion of peat to the fish cake, during the operation of grinding it, the peat acting as an excellent absorbent of ammonia, and as an antiseptic. This is applicable to the fish cake that has not been treated with sulphuric acid.

Properly prepared fish cake is fully equal to guano as a fertilizer, and it can be prepared at a much lower cost than guano can be brought from the coast of Peru. There are doubtless many places on our coast, where fish can be obtained in adequate quantities for the manufacture of this manure.

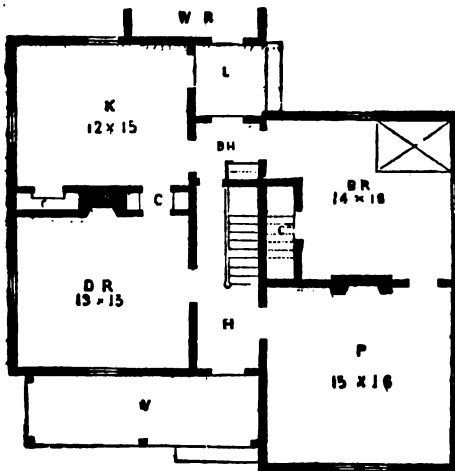
GOOD COWS.—Mr. J. B. Philbrook, of Hardwick, Vermont, has two cows of the native breed, (one of them may be slightly crossed with the Devonshire,) from which he made and sold six hundred lbs. of butter last season, besides supplying his family of two persons with milk and butter. I was at his house to-day and he showed me a tub, containing twenty-two and a half lbs. of beautiful butter, which he had just churned from eight days' milk, being the first the same two cows had made since their calves were taken away this spring. What is remarkable in this case is, that his dairy woman is his mother, who is ninety-four years old. She never keeps a hired-girl, and her boy, the said J. B. P., who is now nearly seventy years old, does not intend to marry while his mother can do her work.—S. D. KIMBALL, *Barton, Vt., April 1st, 1856.*

☞ If you would not be forgotten as soon as you are dead, either write things worth reading or do something worth writing.



A BEAUTIFUL COTTAGE.

This is another of those tasteful, convenient, and every way agreeable designs from the Messrs. *Cleveland and Backus' Work on "Village and Farm Cottages."* We have heretofore spoken of the excellence of this work, and as we look on its fair and attractive pages again, we cannot help wishing that every person about to build should have a copy of it before him. A single glance at the features and finish of this cottage would show to the passing observer, that the owner was both able and willing to consult his tastes as well as his purse.

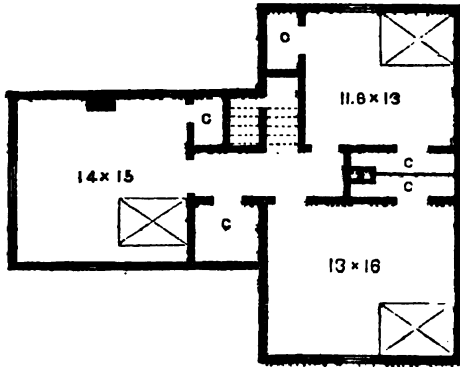


FIRST STORY PLAN.

The arrangement needs some explanation. The stairs, starting just back of the parlor-door on the right side of the hall, land on a platform, six feet above the floor, from which they return over the bedroom closet. At the rear of the landing, a partition crosses the hall, with a door at the side of the staircase. The cellar flight, starting in the back hall, goes down under the main stairs, that part of it beyond the platform being incased. The back porch is open, and the wood-room is beyond it, with kitchen-pantry, and other conveniences.

In the second story, the stairs land over the partition between the parlor and bedroom. There are two closets between the chambers at the right of the hall—one for each. There is a small one also in the back chamber beyond the stairs. There is a large closet in the hall for bedding, etc., and a small one in the left-hand chamber. If needful, this room may be divided in the centre, and a portion of the hall closet devoted to the front half.—The chimneys are of brick, and topped out with the same. The small dormer windows in the roof are intended for ventilation as much as for light. But they are decorative features also. The window caps are of plank, supported on simple brackets. The front gable window has a flower-balcony. The verandah is solid and plain, and is so finished as to show its construction. Sawn brackets of solid plank adorn the gable cornices, while the extended rafters are made to show along the eaves.

The first story is nine feet high. The second is like those last described.



SECOND STORY PLAN.

Though this house would not be out of place on almost any village lot, it is especially suited to one somewhat irregular in surface or outline. It is well fitted for a corner house, the fronts, seen in the engraving, showing on the two streets. In any event, the lot on which it stands should be of good size.

This plan may be easily spoiled. No alteration should be attempted without good advice. Some practical man may perhaps object to its irregularity. He may wonder that one part of the house stands back of the other. If he prefer the square, dreary, double house, so common formerly, and seen sometimes still, his wish is easily gratified, and for a model he can take a packing-box.

The cost of this house is \$1,625.

For the New England Farmer.

POTATOES AGAIN.

MR. EDITOR:—Every one holds very tenaciously to his own judgment in all things, potatoes not excepted. Each farmer knows how much he expects, and how much he raises from an acre of ground; and if the product exceeds his anticipations, all well; if not, why the season was not favorable. Himself excused, he, in the prevalently becoming assertion, says, with all the swell of a Dutch sage,—"Farming don't pay." As *don't* is self-evident to most persons, and especially to intelligent observers, under the means, further remarks are not needed.

Farming requires study, money and a disposition to try the soil. In East or West the same necessity is found of understanding the applications for different localities and soils. Improvements are necessary in all that hands can be placed upon.

And the practice of farming is better conducted by intelligent men than by the antiquated booby whose chief end is to work hard and drink cider—and who lives on the same place that his father wore out before him.

I am of the opinion that good, fair, fully ripe, and middling potatoes, planted on well prepared ground, will insure a good and respectable crop. Nevertheless, yet notwithstanding, if— Enough.

W.

For the New England Farmer.

CHEAP LUXURIES—LAWNS.

BY H. F. FRENCH.

Without attempting to philosophize upon emotions of Beauty, we may assume that the contemplation of some objects in Nature gives pleasure to all, in a greater or less degree. This idea of Beauty seems in some degree innate or natural, and to be independent of the idea of Utility.

A leopard is more beautiful than a donkey, and a rose is more beautiful than a potato, unless to a half-starved Irishman, though the donkey and the potato be the very types of Utility, as the leopard and rose are of mere Beauty. All persons, however uncultivated their taste, seem pleased with cultivated nature, if the expression be allowable, such as lawns and hedges, and beds of flowers, and similar embellishments of artificial grounds, though many persons entirely overlook the natural beauties of forest, and river, and mountain, which have surrounded them from childhood. It is, perhaps, because the one comes to them as a surprise, and so attracts the attention, while the natural surroundings of their youth had never such novelty as to call for especial notice. Beauty, like the vital air, has surrounded them always, and been inhaled with every breath unconsciously, and doubtless, like this same air, would be somewhat missed were its existence to cease. This natural taste increases indefinitely by cultivation, and every man who has a house and land, desires at once to make it beautiful to those within, and attractive to those without.

Extravagant expenditure about our houses is the besetting and somewhat peculiar sin of Americans. The man who even builds a house, without pecuniary embarrassment, by reason of inaccurate estimates at the outset, or a gradual yielding up of his common sense to the desire to make a display of his taste, such a man is rare; but the man who not only builds a house, but also undertakes landscape gardening, and lives to a respectable old age out of the alms-house, would be a curiosity.

Yankees are proverbial for getting their money's worth, but that is only done in the way of trade. Nobody gets worse cheated than they, when they leave business and go a pleasuring. In all New England we pay too much for pine wood architecture, in the way of houses and stables and ornamental fences, and the like, and too little for those ornaments which Nature so readily offers us, such as lawns and hedges, and grand and graceful trees. We can see in any village of moderate pretensions, many dwellings where hundreds have been expended in the poorest attempts at the Gothic or Grecian style, while all around is as bare and desolate as a brick-yard, the funds of the builder having been exhausted by the time the roof was covered. Again, we see before many a cheap house, a front

yard fence of structure as elaborate as the figures on a blackboard made by the first class in trigonometry, and many a man can afford to pay a carpenter for building a white pine, white painted summer-house of boards and laths, whose means some how completely give out, before he can get a single evergreen tree, or a single vine, to cover the nakedness of his land.

There is a limit to every man's means. Even Queen Victoria, whose establishment, including husband and children, is economically managed at the annual cost of about five millions of dollars, is obliged to call on Parliament for occasional extra allowances, so that, with rich or poor, the question is how can limited means be made to afford the most of the necessities, comforts and luxuries of life. I commenced, with the intention now, when we all, by opening our eyes, can at once test the matter, of suggesting what are the cheapest as well as most beautiful surroundings of our country houses.

And at the head of the catalogue, first, second and third, like action in oratory, I place *Green Grass*. Surround your house with grass, or a lawn in front, at the sides, any where there is room. No matter whether the space be acres or feet, nothing is so beautiful, from the opening spring to the close of Autumn, as the green grass. But cheap and common as is the grass, it is seldom that we see even a small enclosure kept green through the season.

In England, beautiful lawns are easily preserved, for the climate is moist and equable. There, where the climate is, on the whole, milder than here, the Indian Corn will not ripen for want of the burning summer heat of the sun. Here, the same clear sun that ripens the corn, at the same time shrivels the grass, unless some care is bestowed upon the preparation of the soil, as well as the keeping of the lawn. Still, as I said, a lawn is our cheapest luxury. Two things are essential to a beautiful lawn. The first is *deep culture* of the soil, so that the roots may strike down, where they can, in the driest time, find moisture. On my own place I subsoiled the land, which is sandy, to the depth of sixteen inches, and planted it with potatoes, the year before sowing it. It has in the six years since it was sowed, once or twice been dried in spots in August. Had it been spaded thoroughly to the depth of eighteen inches, it would never have changed its verdant hue. Every man must judge for himself, according to the nature of his land, as to the depth of tillage required. Deep tillage is the one thing needful at the start. The soil need not be very rich, but it should be thoroughly pulverized, cleared of all noxious grasses, and perennial weeds, such as white weed and other cumberers of the soil.

Then sow in spring or fall with grass seed, and

nothing else. The idea, which is common, of sowing a few oats or other grain, just to shade the grass, is entirely erroneous. It would be almost as rational to let your neighbors turn into your pasture a few large oxen, just to shade your calves, in hot weather, as to sow these rank feeding grains, to shelter your lawn grass.

I sow nothing but what we call here *red top*, (in Botany *Agrostis Vulgaris*;) and white clover, for lawns. All the seed stores have lawn grass seed for sale. I never knew any of it to come up, other than that composed of a mixture of our common grasses. The ground should be rolled, and the lawn is then finished.

The other essential to a beautiful lawn is *frequent and close cutting*. Cut the grass as soon in the spring as the sharpest scythe will clip it, long before it begins to head, and keep it as short as possible through the season. I have found four cuttings in the season to be sufficient for mine, but in most places, perhaps it might require more.

We occasionally see, in travelling, some spot before an old house, where sheep or horses have grazed at their pleasure, which presents the best idea of a nicely shaven lawn, that we find. To keep the lawn perfectly even, it should be rolled with a heavy roller after each cutting, but at least, it should have a thorough rolling once or twice in the spring, to crush down any irregularities made by the frost, or small stones, or other objects which may be in the way of the scythe.

An occasional top-dressing in the fall, and in two or three years with fine compost, or superphosphate of lime, or ashes, will be sufficient to preserve the fertility of the soil.

Having laid out the lawn, be careful not to crowd it with trees, a few fine specimens of the elm, the Scotch larch, an occasional group of white pine, a hemlock now and then, or a group of them, a trellis with a rose or honeysuckle, a few flowering shrubs, according to the extent of the ground, may be added, but not so as to interfere with each other, or the *open* impression of breadth and space, which is essential to the true idea of a lawn.

Then, with a well-kept hedge of Buckthorn or Privet, and walks neatly kept and evenly cut through the turf in graceful curves, we have, at the smallest possible cost, a perfect "thing of beauty," in its way, which Solomon in all his glory could not equal.

In the March number of the *Farmer* for 1852, I wrote of hedges. My Buckthorn hedge, about twenty rods in extent, which is there named, planted in 1849 and '50, has now arrived at the dignity of a fence. This spring, the boards which had protected it were removed, and the hedge, about three feet high, cut square and even, I am not ashamed of. A single invisible wire runs along the top of it, for protection against cattle in the street, and thus

far proves sufficient. I defy the art of man, with wood or metal, at any cost, to make a fence so beautiful for a country residence, as a living hedge; and I challenge the world of gardeners to form, by the culture of flowers even, a landscape so permanently and satisfactorily lovely, as the quiet, humble grass, on a well-kept lawn.

For the New England Farmer.

PRESENT OF A PAPER—BARNs.

MR. EDITOR:—A few weeks since, I received a number of your paper containing a receipt making me an advance paying subscriber for one year. My present purpose is not the finding out of my friend, who chuses to remain incognito. I leave that to time and chance. But I most certainly *shall* find him out.

The present of a *paper* is at once neat, chaste, useful and unexceptionable. Nothing can be more so. It may be received as a gentle hint that a little more reading may be good for us. That to be a little more intellectual will make us better and more *lovable*. To a farmer it may intimate that a little more learning is no dangerous thing. That a little more use of books, or even the *pen*, need not unfit us for using the other implements of our art.

The *N. E. Farmer* on my table, falls into the good company of the *Maine Farmer*, the *Working Farmer*, &c., and no jealousies are yet engendered by the meeting. The elder installed members of the group are not ashamed of the venerable one last in place. Not the least difficulty is apprehended.

A present of a good paper to a friend is yet too much of a novelty. Such an act has sometimes been perpetrated in Maine, and in no instance, to my knowledge, has the least trouble grown out of it.

Being a farmer, and I may be allowed to say, something of a reading one—not much of a writing one—I am often sorely tempted to drop in a few words for the *papers*, when I fancy that the *idea* in a well-written article might have been carried a little farther with advantage. Though I generally manage to quiet such desires, yet the case has happened where I have indulged a little, and *may* do so again.

In No. 10 of the current volume, your correspondent, W. D. B., of Concord, has advanced some just and timely ideas on barns.

In the planning of all buildings, the mathematical fact should ever be kept in our view; that in economy of outer surface, the form of the square and cube are to be approached. In the ground plan for a barn, if the structure is to be a large one, the best practical width should be selected, which is from 40 to 44 feet; the best height, which will be found about 20 feet, little more or less; and extended in length to make your desired dimensions. But the point I wish to make here, is, that mathematical fact does not allow the economical builder to stop at the square and the cube, but to reach onward to the figure of the circle and the sphere.

In practice, with the materials mostly in use at present, barns may not readily admit the circular form. But for barns of medium size, we make an approach to the circle by adopting the octagon, which is free from valid objections.

Let us for a moment compare this form with the square. A barn 30 by 30 feet, 16 feet high, contains 14,400 cubic feet; an octagon of the same surface, making 15 feet on each of its 8 sides, same height, encloses 17,385 feet.

A barn 40 by 40 feet, 20 feet high, contains 32,000 feet. An octagon, 20 feet sides, same height, 38,624 feet. Here we see a clear gain of about one-fifth of the storage capacity.

For barns of larger dimensions, I have not given this plan much thought. They may be objectionable. For medium size there is no loss in space or convenience in cattle stalls, but a positive gain.—There is a clear gain in material and labor in the erection of a good, staunch frame, by choosing the octagon over the square. Beams and posts internally above the girts and scaffold flooring are unnecessary.

I disclaim being a mechanic or the son of a mechanic; but could give my *private opinion* to a mechanic, on the size and position of every stick of timber in the frame of a moderate sized octagon barn. Say a barn with storage for twenty to thirty tons of hay.

That such a barn is convenient and just the thing, I have daily, actual, positive proof.

Yours sincerely,

C. C.

Foxcroft, Maine, March 17th, 1856.

REFRIGERATION.

We are glad to learn that this safe and almost painless anesthetic agent is rapidly gaining favor among surgeons. By freezing the part, more or less, according to the case, many of the minor surgical operations, such as the removal of tumors, the extraction of teeth, the destruction of morbid growths and abnormal surfaces, can be performed with almost entire immunity from suffering, and with none of the danger attending the use of chloroform.

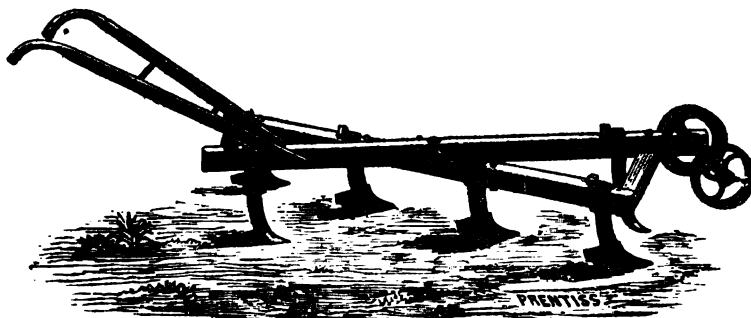
One of our city dentists is now extracting teeth in this way, to the great delight of those who have not the fortitude to endure pain, and who fear chloroform and other narcotic anesthetics. Nothing is easier than the application of the freezing mixture. Two parts of snow or pounded ice to one part of common table salt, makes a convenient frigorific. The ingredients may be mixed and placed in a linen rag, a piece of fine gauze, or a bladder, or in a hollow brass ball constructed so as to fit the part or surface, and held in contact a few minutes, or until the requisite degree of congelation has taken place. The gums are so thin that they are frozen by a few moments' application, when the rotten tooth, decayed stump, offending prong, or other remnant of *odontology*, may be taken out before the gums recover their sensibility. As many deaths have occurred in persons apparently in good health, while under the influence of chloroform, for the purpose of having a tooth extracted, we commend this plan to all who have teeth to be pulled, or who delight in dental surgery.—*Water Cure Journal*.

COUGH IN HORSES.—We once had a horse that had caught a bad cold, and coughed so severely that he could be heard half a mile. All sorts of remedies were proposed—enough we should think to kill any good horse outright. These remedies were all rejected, although some might have proved useful, and the following course pursued. The horse

was in the first place very carefully and moderately used so to never produce perspiration. He was carefully blanketed when the weather was cold, (it was about mid-autumn,) or when he was in the least degree heated—he was kept constantly on green and succulent food, clover, roots, &c., and was supplied with plenty of the best water at all times. In a few weeks he was perfectly well.—It is an old saying that more depends on the nurse than on the physician, which was verified in this instance.—*Agricultural Exchange.*

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Auburn, Mass., May 29, 1856.

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MARCUS BENNETT.

Auburn, Mass., May, 1856.

A PRACTICAL MISTAKE.—In a certain town in Vt., a fresh son of Erin and a young man who was familiar with the "beasts of our forests," were walking leisurely home from their day's labor when a little animal started off before them. "Och!" says Pat, "I'm sure its a Pacock or wild Tarky," and made after him, endeavoring to secure him under his coat, which he was carrying on his shoulder.—"Hold, pat," said his friend, "it's a skunk." "An sure, I'm after kaping the lad," said Pat, and threw his coat over the Pacock and clasped him in his arms! The scene suddenly changed, and the *wild tarky* was off, while Pat was rubbing his face and crying, "Me eye's out! me eye's out! I'm kilt entirely."

For the New England Farmer.

WOMAN'S INFLUENCE.

BY SUSIE SUMMERFIELD.

"Woman's Influence! Why, how does it happen that the editor of the *New England Farmer* has inserted a short sketch entitled thus in the agricultural department of his paper?" exclaims some wise, elderly gentleman, who is a practical "farmer," while he sits in his cosy arm-chair, by his own fire-side; as he takes up this weekly paper, which ever proves a source of pleasure and profit to his circle of "loved ones." Then, the dear old gentleman rubs up his spectacles, and holds the light closely to the freshly printed page, as he mutters, "Humph! woman, woman! what has she to do with us men, in being interested in the progress of agriculture, that we should read of her influence here?" "O, father! perhaps this article may define the way in which she retards the progress of agriculture; for I never knew a lady to confess that she was interested in such a masculine and unrefined science, yet," exclaims a pert young farmer by profession, rather than by practice.

But let me assure you, my dear sir, that "Susie" believes that woman does, will have, and must have an unbounded influence in rendering agriculture a popular, progressive science; or in making it contrawise. "Why?" Because farms are carried on by men; and men are influenced by women, or *ladies*, if this term suits thee better, my young gentleman farmer. How, do you ask? It is by her becoming interested in, and by understanding what is the nature and character of the employment of those with whom she is associated in life.

Young ladies are sent to our institutions of learning that they may become adepts in the higher branches of education, such as Geology, Chemistry, &c. If she acquires a knowledge of these different branches, is she not prepared to assist, guide and influence the male members of her home circle, who are engaged in a science which needs instruction from such elevated sources? Her feminine taste naturally urges her to admire the works and wonders of nature, and if she becomes interested in the planting and sowing of seed, in the training and thriving of fruit trees, and in the cultivation of vegetables, as well as the development of the exotic, the opening of the perfumed rose-bud, and the training of vines which ornament the trellises that beautify her portico, and which festoon above her window; can she not lend a new charm, a new interest to the tillage of the soil, which every day is becoming more and more popular, profitable and pleasant to the intelligent, sturdy sons of New England? If, instead of peopling the air with images, and building imaginary structures in fanciful dreams, she uses her expanded faculties in appeasing man's irritability, as he meets with his everyday vexations, and grants soothing sympathy unto him, as he performs his wearisome toil, will not woman's interest and influence be acknowledged, as welcomed by old and young farmers? When woman employs her knowledge of the mathematics, calculating the loss and gain there is in farm work, and in the products of the soil, as well as to severely discipline the mind, will she not receive the acknowledged confidence of every practical, judicious farmer in Christendom?

Yes! she may become a sunbeam within the household of every farmer, which shall send cheer-

ing light deep down into the honest, generous heart of every yeoman in the land; or, by her listlessness, she may prove herself to be like a vapory cloud, which will dim the lustre of every star of promise that may shine within his horizon.

Let us see to it, then, that we lend sunshine to our homes, and that, by our *affectionate* words, and buoyant hopes, we chase away every shadow that frowns upon our households, and then we will coaxingly inquire of our farmer-husbands, and of our farmer-brothers, if *woman* cannot lend an influence to agriculture.

Sometimes we meet with *deceived, would-be-dignified* young ladies, who imbibe the notion that the occupation of farming is not so dignified as a professional or mercantile life. O! how erroneous is such an idea! Do you not call that pursuit dignified which brings a person into an intimate acquaintance with the most wonderful, elaborate operations of nature's laws, and with the most sublime, intricate beauties of creation; while it strengthens the mental faculties by continually awakening deep, calm reflection, and by keeping every one of man's energies fresh, vigorous and active? The farmer who swings the scythe or the sickle amidst the graceful heads of the ripened grain, or among the purple clover heads, which exude their fragrance upon the summer air, is far happier, and just as dignified as the pale faced merchant who handles costly fabrics with dainty fingers, or puzzles his brain over his "ledger" in his counting-room; or, as the restless mechanic in his work-shop. Though he is not able to count his gain in silver and gold dollars, with such rapidity, yet his expenses are far less, and he continually receives by far the most interest paid in unalloyed happiness.

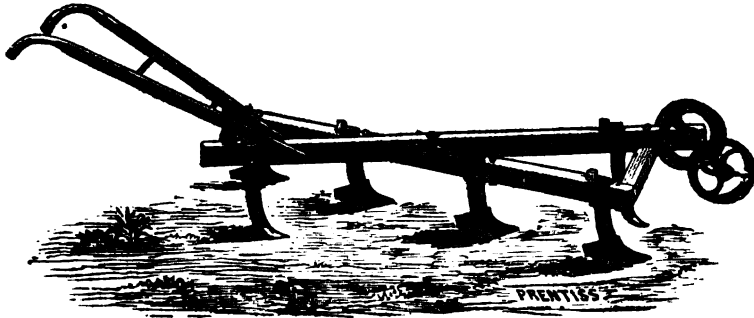
That man who looks with the feeling of paternity upon the buds of a plantation of choice trees, is as much elevated and as happy as the scholar or professor who rejoices in the birth of a new idea, or beholds his completed discourse, oration or plea, with intense delight.

Sometimes, when men begin to talk of the best methods of enriching their lands, of the fertilizing properties which compost contains, of the benefit which is derived by farmers carefully selecting their stock from choice breeds of animals, and of the most efficacious manner of fattening swine, ladies toss their curls, and send out looks of disdain from their bright eyes, and are shocked that farmers will be "*so vulgar*" as to talk of such topics in their dignified presence! But ministers discuss theological questions; moralists converse upon themes connected with their efforts for reforming society; lawyers speak of the best mode of argument; statesmen discourse upon politics, and the physicians announce the latest discovery in medical science, and talk of the different ingredients which form medical compounds; and the ladies all smile and listen, while they pronounce them very skilful, influential practitioners, since they are so interested as to talk about their different professions. Now, if agriculturists desire to become skilful operators upon their soil, must they not *talk too* about their business, and will not the gentler sex encourage them to do so? But is it vulgar to be interested in a science which engaged the attention of the "father of our country," Washington; and which is connected with the pruning and training of that tree, the falling fruit of which first aided the great philosopher, Newton, to discover the laws of gravi-

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I have used one of the above-named Cultivators to get my grain in this spring and for pulverizing my land, and I do most fully concur in the above statement of Mr. Emerson. MARCUS BENNETT.

Auburn, Mass., May, 1856.

A PRACTICAL MISTAKE.—In a certain town in Vt., a fresh son of Erin and a young man who was familiar with the "beasts of our forests," were walking leisurely home from their day's labor when a little animal started off before them. "Och!" says Pat, "I'm sure its a Pacock or wild Tarky," and made after him, endeavoring to secure him under his coat, which he was carrying on his shoulder.—"Hold, pat," said his friend, "it's a skunk." "An sure, I'm after kaping the lad," said Pat, and threw his coat over the Pacock and clasped him in his arms! The scene suddenly changed, and the *wild tarkey* was off, while Pat was rubbing his face and crying, "Me eye's out! me eye's out! I'm kilt entirely."

For the New England Farmer.

WOMAN'S INFLUENCE.

BY SUSIE SUMMERFIELD.

"Woman's Influence! Why, how does it happen that the editor of the *New England Farmer* has inserted a short sketch entitled thus in the agricultural department of his paper?" exclaims some wise, elderly gentleman, who is a practical "farmer," while he sits in his cosy arm-chair, by his own fire-side; as he takes up this weekly paper, which ever proves a source of pleasure and profit to his circle of "loved ones." Then, the dear old gentleman rubs up his spectacles, and holds the light closely to the freshly printed page, as he mutters, "Humph! woman, woman! what has she to do with us men, in being interested in the progress of agriculture, that we should read of her influence here?" "O, father! perhaps this article may define the way in which she retards the progress of agriculture; for I never knew a *lady* to confess that she was interested in such a masculine and unrefined science, yet," exclaims a pert young farmer by profession, rather than by practice.

But let me assure you, my dear sir, that "Susie" believes that woman does, will have, and must have an unbounded influence in rendering agriculture a popular, progressive science; or in making it contrawise. "Why?" Because farms are carried on by men; and men are influenced by women, or *ladies*, if this term suits thee better, my young gentleman farmer. How, do you ask? It is by her becoming interested in, and by understanding what is the nature and character of the employment of those with whom she is associated in life.

Young ladies are sent to our institutions of learning that they may become adepts in the higher branches of education, such as Geology, Chemistry, &c. If she acquires a knowledge of these different branches, is she not prepared to assist, guide and influence the male members of her home circle, who are engaged in a science which needs instruction from such elevated sources? Her feminine taste naturally urges her to admire the works and wonders of nature, and if she becomes interested in the planting and sowing of seed, in the training and thriving of fruit trees, and in the cultivation of vegetables, as well as the development of the exotic, the opening of the perfumed rose-bud, and the training of vines which ornament the trellises that beautify her portico, and which festoon above her window; can she not lend a new charm, a new interest to the tillage of the soil, which every day is becoming more and more popular, profitable and pleasant to the intelligent, sturdy sons of New England? If, instead of peopling the air with images, and building imaginary structures in fanciful dreams, she uses her expanded faculties in appeasing man's irritability, as he meets with his everyday vexations, and grants soothing sympathy unto him, as he performs his wearisome toil, will not *woman's* interest and influence be acknowledged, yea, welcomed by old and young farmers? When woman employs her knowledge of the mathematics in calculating the loss and gain there is in farm work, and in the products of the soil, as well as to merely discipline the mind, will she not receive the acknowledged confidence of every practical, judicious farmer in christendom?

Yes! she may become a sunbeam within the household of every farmer, which shall send cheer-

ing light deep down into the honest, generous heart of every yeoman in the land; or, by her listlessness, she may prove herself to be like a vapory cloud, which will dim the lustre of every star of promise that may shine within his horizon.

Let us see to it, then, that we lend sunshine to our homes, and that, by our *affectionate* words, and buoyant hopes, we chase away every shadow that frowns upon our households, and then we will coaxingly inquire of our farmer-husbands, and of our farmer-brothers, if *woman* cannot lend an influence to agriculture.

Sometimes we meet with *deceived, would-be-dignified* young ladies, who imbibe the notion that the occupation of farming is not so dignified as a professional or mercantile life. O! how erroneous is such an idea! Do you not call that pursuit dignified which brings a person into an intimate acquaintance with the most wonderful, elaborate operations of nature's laws, and with the most sublime, intricate beauties of creation; while it strengthens the mental faculties by continually awakening deep, calm reflection, and by keeping every one of man's energies fresh, vigorous and active? The farmer who swings the scythe or the sickle amidst the graceful heads of the ripened grain, or among the purple clover heads, which exude their fragrance upon the summer air, is far happier, and just as dignified as the pale faced merchant who handles costly fabrics with dainty fingers, or puzzles his brain over his "ledger" in his counting-room; or, as the restless mechanic in his work-shop. Though he is not able to count his gain in silver and gold dollars, with such rapidity, yet his expenses are far less, and he continually receives by far the most interest paid in unalloyed happiness.

That man who looks with the feeling of paternity upon the buds of a plantation of choice trees, is as much elevated and as happy as the scholar or professor who rejoices in the birth of a new idea, or beholds his completed discourse, oration or plea, with intense delight.

Sometimes, when men begin to talk of the best methods of enriching their lands, of the fertilizing properties which compost contains, of the benefit which is derived by farmers carefully selecting their stock from choice breeds of animals, and of the most efficacious manner of fattening swine, ladies toss their curls, and send out looks of disdain from their bright eyes, and are shocked that farmers will be "*so vulgar*" as to talk of such topics in their dignified presence! But ministers discuss theological questions; moralists converse upon themes connected with their efforts for reforming society; lawyers speak of the best mode of argument; statesmen discourse upon politics, and the physicians announce the latest discovery in medical science, and talk of the different ingredients which form medical compounds; and the ladies all smile and listen, while they pronounce them very skilful, influential practitioners, since they are so interested as to talk about their different professions. Now, if agriculturists desire to become skilful operators upon their soil, must they not *talk too* about their business, and will not the gentler sex encourage them to do so? But is it vulgar to be interested in a science which engaged the attention of the "father of our country," Washington; and which is connected with the pruning and training of that tree, the falling fruit of which first aided the great philosopher, Newton, to discover the laws of gravi-

tation? Is it undignified to speak of that demonstrative knowledge which enables men to furrow the ground; and then to cover it with fields of luxuriant corn, with carpeted meadows of green grass, dotted here and there with fragrant clover heads, and trailed over with exuberant vines, bearing clusters of purple and golden fruit; all of which help to form the picturesque part of nature's beauties? Was that woodman unrefined, who wielded the axe which hewed those chips from the stately tree, that awakened a train of thought in his mind that enabled him to make that appropriate comparison in referring to children and parents, when he said "that the little chips were always nearest to the heart," and so he believed the little ones to be to the parent. No! my lady readers, he was one of nature's pupils, and she teaches naught but purity, and *heart refinement* in her lessons of wisdom.

Did not our Saviour select themes connected with the fields to discourse upon in parables, to vast concourses of people? Was it not a cornfield, which received the impressions of his holy feet as he plucked the silken ear to feed the hungry on the Sabbath day? Was it not a *garden* which was stained by Jesus' precious blood, when he was crucified for us, poor, blinded, helpless worms of the dust? Was it not a garden, filled with trees, laden with rich fruit and adorned with ambrosial fountains, which formed an Eden for our first parents? Was not agriculture the first science in which man was instructed, one which he was commanded to pursue? And yet, some call it unprofitable, undignified and unrefined, compared with the mechanical arts, and the different professions.

But ho, ye women and daughters of New England, of America, even, arise, and prove yourselves bright spirits which shall gladden homes, warm cheerless hearts, and inspire our young and old farmers with new zeal and new courage in the culture of the soil.

When we can number the noble trees which spring from little seeds that mysteriously float through the air, when we can calculate the flowers that the summer shower and the summer sun causes to spring into glad luxuriance from the generous earth, we may then, and not till then, be enabled to estimate the benefits which may arise when right minded, highly educated and sympathetic females begin to exhibit an interest and a rational knowledge of agriculture. Then, I believe the readers of the "*New England Farmer*" will not be surprised to read a few ideas upon "Woman's Influence" in the agricultural department. Will they, Mr. Editor?

REMARKS.—No, no! A few articles like this, written by one who, herself, adorns the farmer's home, and whose teachings spring from bright examples, *will* awaken many to a true sense of the beauty, propriety and dignity of rural life. This is good seed, madam, we will see that it is sown on good soil, and it shall bring forth an hundred fold.

CONDENSED EGG.—A process has been devised by Messrs. Thurgar, of the Albion Mills, Norwich, for drying eggs, so that they will keep good for any length of time. This is effected by evaporation. The yolk and white of the egg are exposed to a slow heat, and the moisture is thus driven off. The

whole is then reduced to powder and packed up in tins. The material is not necessarily kept air-tight, but may be freely exposed to the air. The powder is used in the ordinary way as eggs are, being mixed with a little water, and is thus an excellent substitute for milk on long voyages, besides capable of being used for all cooking purposes in the same way as the fresh egg. The powder will keep any length of time without fear of deterioration.—*London paper.*

For the New England Farmer.

THE STUDY OF BOTANY.

"A standing objection to Botany has always been, that it is a pursuit that amuses the fancy and exercises the memory, without improving the mind or advancing any real knowledge; and when the science is carried no further than a mere systematic classification, the charge is but too true. But the botanist, desirous of wiping off this aspersion, should be, by no means, content with a list of names; he should study plants philosophically, should investigate the laws of vegetation, should examine the powers and virtues of herbs, should promote their cultivation, and graft the gardener, the planter and the husbandman on the phytologist. Not that system is by any means to be thrown aside; without system the field of nature would be a pathless wilderness; but system should be subservient to, not the main object of, pursuit.

"Vegetation is highly worthy of our attention; and in itself is of the utmost consequence to mankind and productive of many of the greatest comforts and elegancies of life.

"The productions of vegetation have had a vast influence on the commerce of nations, and have been the great promoters of navigation. As every climate has its peculiar producer, our natural wants being on a mutual intercourse, so that each distant part is supplied with the growth of every latitude.

"Instead of examining the minute distinctions of every various species, of each obscure genus, the botanist should endeavor to make himself acquainted with those which are useful. You will see a man readily ascertain every herb of the field, yet hardly know wheat from barley, or at least one sort of wheat or barley from another."—*White's Natural History of Selborne, 1778.*

This last remark reminds us of an instance in our school days. With our good professor, we made many botanical and pleasure excursions out of the city. Returning once we were gathered about our teacher on the deck of the steamboat talking over our *specimens*. Professor W. took up one: "What is this young ladies?" One guessed, and another guessed, but none knew aught certainly. One exclaimed "O, isn't it pretty," another, "what an odd thing," and another, "I wish I had found one for my herbarium, I wonder if it's rare." Its sight seemed to revive some slumbering memory within me. I was sure I had seen it in the rural home of my early childhood. Yes! by patting memory a little I could call up just the spot where I had seen it—off in a neglected corner where things came up of their own accord. But between two I was undecided. There were tomato vines there that came up every year of their own accord. We called them "love apples," and when after careful experiment and many misgivings, we children pronounced them not *poisonous*, we considered

ourselves vastly sage. But on further consideration the plant in our teacher's hand belonged to another weed adjacent in situation. Yes, it was night shade! Our professor laughed. "You are not so far wrong—it is of the same family, but another individual, being a potato blossom." We never shall forget the difference between the three *solanums*.

Children might be greatly interested in the examination and explanation of the ornamental portion of our common and useful vegetables and herbs. Thus incidentally might a taste and love for scientific agricultural pursuits be engendered and encouraged in many who might otherwise turn from farming as an occupation, calling into use physical powers, mere practical matter-of-fact ideas, while the higher powers of mind and heart were little exercised.

ELSIE.

Waukesha, Wis.

EXTRACTS AND REPLIES.

THE RAT AND THE SPARROWS.

MR. EDITOR:—On a pleasant day, last week, four gentlemen were standing in front of a house in South Framingham. It was noticed that three or four sparrows, near a pile of posts and rails, were acting strangely. Soon a large rat was seen to dart from the pile of rails towards the birds. They scattered, and the rat returned. The birds soon gathered again, and the rat again sprung towards them, but soon returned. One of the gentlemen went into his house for his loaded gun, and approached the rails. The birds again gathered, and the rat again appeared and chased one of them a distance of thirty feet, the other birds hovering about the rat. The birds then flew away.

Never having seen or heard of such a thing, I send the facts to you. Were the birds under a charm? Is it an uncommon thing? T. P.

Boston, May, 1856.

REMARKS.—The sparrows probably had a nest near the spot; the rat saw one or more of them, and fancied that they would make him a good dinner, but not having the instincts of the cat to watch and wait, he was disappointed. Most birds make a show of resistance when their nests are in danger. We saw two black-birds, the other day, drive a cow out of the rushes where their nest was undoubtedly bestowed. They would suddenly dart down about her, screaming, and sometimes nearly striking her on the back, until she deemed it best to retire from the rushes and the birds.

PRESERVING SHINGLES.

A few weeks since we published a recipe for preserving shingles, by soaking them in a solution of lime and salt, dissolved in water. A subscriber informs us that he laid several thousand shingles prepared in this way, about eight years ago, and he finds they are now loosening and coming off the buildings. The shingles themselves are perfectly sound, but the action of the salt has caused the nails to rust quite off. Our informant recommends lime alone, as it is sufficient to preserve the wood, and has no effect on the nails.

WINTER GREEN SWEETING.

MR. BROWN:—I send you a specimen of the Sweet Greening; a new variety with me, but may be an old one with you. The best apples to keep through the winter I ever put up.

Respectfully yours, JOSIAH BENNETT.

Westmoreland, N. H., 1856.

REMARKS.—The apples were received in good condition. They are well known to us, and are among the few fine late-keeping sweet apples. If kept in a cool, damp cellar, they are usually in excellent condition in May and June.

CATERPILLARS, SMOKING, PISMIRES.

We have six regular papers, and I believe the *Farmer* would be the last I should be willing to dispense with. There is a great deal of valuable information in every number; but there is one thing that I have not yet seen a cure for, that is the disgusting, filthy habit of smoking. If men will not hear to reason nor affection, I should be glad to see them obliged to yield to compulsion.

My husband uses bran, instead of powder, to kill caterpillars; it does not injure the trees. But he has not been able to keep the great black pismires from destroying pear buds; they took more than their share last year, and are determined to, this.

Fitzwilliam, N. H.

MRS. M. A. K.

REMARKS.—If all the women were of the opinion of our correspondent, we think a great many pipes would soon go out. We will say for your comfort, Madam, that there is not a person about the *New England Farmer* establishment who uses tobacco in any shape.

BOOK ON UNDER-DRAINING.

Will you be kind enough to name the best and most thorough publication on under-draining of the soil, describing the uses, benefits and different modes. Perhaps you may remember that I wrote to you last winter for information relative to making a milk house with the waste water from an ice house;—well, I have got it all arranged, and it excels any natural spring that ever broke out of the ground.

T. H. COLLINS.

Locust Lawn, Ind., 1856.

REMARKS.—MUNN's Practical Land Drainer is, perhaps, the best work on the subject in a small compass. It is published by Saxton & Company, N. Y.

BIG DANDELION.

I think I can beat that Bridgewater dandelion noticed in your miscellaneous department.

A dandelion recently growing on my father's farm, had one hundred and seventy-nine buds and blossoms, and three hundred and twenty-three leaves, and weighed thirty-three ounces.

Ashfield, June, 1856. WILLIAM F. BASSETT.

☞ We have just been shown a couple of eggs from the hen-coop of Mr. R. Munroe, of Burlington, Mass., weighing five and one-fourth, and six ounces each.

RANDOLPH OF ROANOKE.—One more is added to the "Randolph of Roanoke" stories, by a Virginian correspondent of *Harper*, who says it has never been published before.

When John Randolph visited Richmond, it was his habit to stop at the Eagle Hotel, and to drive his own horse around to the stables, on another street. On one of these occasions, while performing this latter operation, he was arrested by a country wagon, standing before the grocery store kept by one Simpson and his wife—the wife being the man of the two—and Randolph being impeded in his passage of the narrow street, ordered the countryman to get out of his way. The frightened fellow tried to do so, but Randolph was too impatient, and springing out of his wagon, put after the countryman, who took refuge in the grocery. As Randolph rushed in, Mrs. Simpson was coming out with a bucket of dirty water in her hand, and seeing the excitement of the intruder, demanded of him where he was going.

"Madam," said Randolph, in his shrillest key, "do you know who you are speaking to?" And then drawing himself up to his fullest *lankitude*, he exclaimed, "I am John Randolph, of Roanoke!"

"I don't care," said she, "who you are; but if you ain't out of this house in a minute, you'll get this bucket of slops in your face!"

Suited the action to the threat, she raised the bucket, and would have dashed it over the statesman, had not his discretion, for the first and only time, got the better of his valor. Turning on his heel, he beat a hasty retreat, and left the woman mistress of the field.

BLOOD STOCK.—Who has full blooded Durham, Devon, Ayrshire, Hereford, or Alderney bulls?—*Green Mountain Farmer*.

We have a pure Alderney bull, 18 months old, for sale at a fair price. Hon. B. V. French, of Braintree, has Devons, and Charles B. Clark, Esq., of Concord, Mass., has Durhams.

LADIES' DEPARTMENT.

WHAT THEY SAY OF IT IN HAVANA.

This matter of shopping, as I have before stated, was the subject of our conversation during the whole evening. I intended to criticise these habits, but the feminine portion of the company revenged themselves with a pretty severe attack on the customs of the New York ladies. "You will never see in Havana," they said, "a lady leaving her house at ten o'clock in the morning, and spending the whole day in stores, talking to the salesmen, not only about the goods they wish to purchase, but also about the marriages that are going to take place, and inquiring who the parties are, what is their wealth, annual income, &c., and not returning until five in the afternoon." "And what do you think," said the old lady, "of the married ladies, who during a single promenade through Broadway, bring about the ruin of their poor husbands, who tremble at the thought of a change of seasons, which takes place four times a year, and which requires an entirely new assortment of bonnets, furs, cloaks, shawls, &c.?" "A lady," answered the young-

est girl, "can go out in Cuba with a dress, costing perhaps only three dollars, provided it be tasteful, while in 'the North,' according to what I have been told, it is necessary always to wear expensive things, as the cost, and not the taste, is what is generally attended to."

The Filibuster, also, then rose against me, and said, "What I consider most shocking in the customs of New York, is that a young lady going to purchase new shoes, places her feet on the salesman's knee, in order to have them put on." On hearing this, all the circle burst out into a loud laugh which lasted several minutes. I was greatly abashed, and could make no reply. The fault had been entirely mine in introducing such a conversation. I was pretty rigorously dealt with, and at last concluded to laugh with the rest, and thus diminish the mockery of the company.

The excitement of the ladies became exceedingly great, and seemed like a kind of paroxysm. "Who has ever seen in Havana," they asked, "a lady paying three or five hundred dollars for a cloak, or investing five thousand dollars in the lace trimming of a dress? Where can you find a lady here so lavish as to hire a carriage, which she really does not need, as she has one of her own, and keeping it five or six hours, forgetting that it must be paid for at a high rate?"

"For God's sake I replied, 'let us capitulate! let us capitulate!' But there was no remedy, and I had to suffer the penalty of our ladies' faults."

American ladies, not wishing to place their countrymen in "tight places," and causing them to be troubled, as I was, by faults, in which nobody but themselves are to blame, should reform their customs in that respect. I have come to the conclusion not to marry any lady until she has visited Havana, and learned some lessons of economy.—*Yankee Travels through Cuba*.

FRUIT IN CANS—PIE-PLANT, &c.—Putting up fruits, &c., in sealed cans, is not always successful, as many know from experience. Green corn has been often tried, and generally without success.—The *Ohio Cultivator* says, "Others have a more sad experience in canning rhubarb or pie-plant, which contains so much oxalic acid, that on being used from the cans has nearly been the death of whole families. Keeping in this way seems to give more virulence to its poisonous qualities, which are comparatively harmless when the plant is used fresh from the garden." Sealed glass bottles are much better than metallic cans for this purpose.

[Tomatoes have been put up in the self-sealing tin cans, with complete success, in our family. The fruit was as nice, in mid-winter, as when fresh from the vines.—ED. FARMER.]

TO MAKE FRUIT PIES.—No under-crust should be made to apple or any fruit pie. It is always heavy and not fit to eat. Place a narrow rim of paste around the edge of the plate, and fill with the fruit either raw or stewed, and cover it. The juices will be retained much better, and it will save a sight of butter and flour, which is no trifling consideration in these days, and what is of more consequence, save *dyspepsia*, which costs more.—After cutting, they are taken out with a spoon.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. VIII.

BOSTON, AUGUST, 1856.

NO. 8.

JOEL NOURSE, PROPRIETOR,
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

FREDK HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

SEASONABLE SUGGESTIONS.



AUGUST, an observing writer says, "is that debateable ground of the year, which is situated exactly upon the confines of Summer and Autumn; and it is difficult to say which has the better claim to it. It is dressed in half the flowers of the one, and half the fruits of the other; and it has a sky

and temperature all its own, and which vie in beauty with those of the Spring." August is the old age of Summer—but

beautiful in its age, and unlike any

other month. Along with it comes new tones of the insect world, both by night and day. New hues invest the plants, as the almost unvarying green has changed to a still richer and more conspicuous gold color, contrasted with the leaves of green with which it everywhere lies in contact. The sickle has been, or now is, busy with many of the plants which have come to perfection, and the golden sheaves have been borne away. Summer is rapidly waning, as every sight and sound declares. The pressure of the hay harvest is over, though meadows and second-crops are still behind to swell the value of this important product.

If July has been a dry month, August will present a good time to construct water-cisterns, with which every farm establishment should be provided in a conveniently located place. If the farm buildings are numerous and compactly situated, a small expenditure will suffice for the construction of all the apparatus necessary for conducting the water from the roofs into the reservoir, which, for great-

er convenience, should be located in some place where it may subserve the wants of the animals occupying the yards in winter, as well as the household. The convenience and value of such an arrangement will be particularly obvious during seasons of protracted drouth, or accidents from fire.

Good and substantial reservoirs—perfectly water tight, have been formed of split stone, brick, and even plank, the interior surface, as well as the bottom, being coated with cement. But they may be made without the use of either of these materials, by laying the cement directly on the surrounding earth. These cisterns should be "decked over," and made perfectly tight, and furnished with efficient pumps. The expense, contrasted with the advantage, is small, and as they last for many years, no one who studies his own convenience and the comfort of his stock—to say nothing of the security of his property and his family—will be disposed to consider capital invested in this way, otherwise than judiciously and profitably laid out.

During this month, the strawberry beds will require some care, if we wish to find them in a condition next spring to produce a liberal crop. It is not only necessary to keep them free from weeds and the ground in a well cultivated condition, but if the month be a dry one, they should be liberally watered once or twice a week, and the runners carefully cut away. If the runners are allowed to spread as they please, they will cover the ground, and in the spring your bed will probably present such a mass of weeds and plants as to defy all your patience to set them right again. Many a patch has been abandoned in despair when found in this condition.

Young trees that were budded last year must be attended to, and kept clean and well cultivated, and the numerous shoots that spring out from the main stem carefully cut away, allowing the vigor of the tree to go to the young scion. This, however, must be attended to at an earlier date, as well as in August.

One other suggestion for August, and we will leave the reader to seek his fields and crops. Many persons complain that their hens will not lay, and that notwithstanding their assiduity in furnishing them with all the articles ordinarily recommended to ensure fecundity, the eggs they produce will not "half pay the expenses." Now we presume there is *something* lacking, or the fowls would certainly not run their owners in debt. It is not generally understood even by those who *profess* to be the most deeply versed in the mysteries of 'Henology,' that the hen, being omnivorous, requires, to ensure fecundity, a very liberal allowance of *meat*! When enjoying her liberty in the fields, pastures, or door-yards, the principal part of her sustenance is derived from insects, worms, &c. She partakes but sparingly, at such times, of grain, and often when that article is supplied, leaves it for the more inviting food which nature supplies her with, in her favorite haunts. Now if we confine her where the natural propensity for this description of food cannot be gratified, even though we supply the best of grain, and in abundance, she will cease to lay. The privation affects her health, and there will necessarily be an end of *profit*, until the deficiency is supplied. When fresh meat or fresh fish cannot be obtained, the common scraps of the butcher, which are hard and compact, and can be kept any length of time, answer all the desired purpose.

DIFFERENCE IN COWS.—Cows under certain constitutional circumstances, are naturally disposed to convert their food into fat; so much so that there is great difficulty in keeping some individuals in a breeding state, and more especially the improved Short-horns, Devons, and Herefords. Turn a cow of this description into rich grass, and she is soon useless for anything but the shambles. The quality of the milk she gives may be fine but the quantity almost nothing. We have had a Devon, the property of a noble duke, which carried off the first prize in her class at one of the Royal Agricultural Society's meetings, not giving more than a quart at milking.

On the other hand, there is another class of cows naturally disposed to turn all their food into the pail. Turn a cow of this kind into rich grass along with the one above, and she will rather get poorer every day, if the milk is taken from her; while her plump and sleek rival is gaining weight. The former will consume greatly more grass and water than the latter, returning for it, in proportion, a still greater quantity of milk, but inferior in quality. In town dairies, when fed on sour grains, distillers' wash, &c., the quantity sometimes yielded is almost incredible. When such is the case, however, life is generally short, especially if cows are in a low state at calving. Hence the reason why dairymen purchase near-calves of this class in good condition.

The above two classes may be called extremes between which there is a mean—cows which if turned into a rich field of grass along with the

other, would keep themselves in good condition and give a medium quantity of milk, the quality depending upon the richness of the food.—*Mark Lane Express.*

For the New England Farmer.

HUBBARD SQUASH—POTATOES.

MR. EDITOR:—The subscriber would like to obtain a few seeds of the "Hubbard" squash, recommended in the last *Farmer* by "J. J. H. G." As the name and address are wanting, there seems to be no way of communicating with him except through you. If you can put me in the way to obtain them, you will confer a great favor.

It still seems to be a mooted question, whether different varieties of potatoes will mix, when planted side by side. Mr. French, in his article in the *Farmer* for June, thinks they will not; Mr. Joseph Blake thinks they will, and bases his opinion upon the fact that the product of Jenny Linds or Californias, of a red color, planted near Carters, were white. If his Carters had turned red, he might have had some plausible ground for his opinion to stand upon. Does Mr. Blake know the fact that colored potatoes "sport?" That Pink-eyes will occasionally be entirely colored, with no white on them? That Merinos, Peach-blows, Californias (the latter especially,) and other colored potatoes, are often partly, and sometimes entirely white? I have raised, within the last five years, hundreds of varieties of the potato, and have found no mixing of the roots from planting side by side, and no change of varieties produced in that way; though I have produced new varieties by sowing the true seed (from the balls;) and agree with Mr. French, that they will mix in no other way.

ROBERT D. WEEKS.

Bowen's Prairie, Iowa, June 24, 1856.

REMARKS.—If correspondents would put their names to their communications, it would save us some labor and accommodate others.

TAME FISHES.

The last efficient sea-fish pond we chanced to examine is situated near Port Nesson, in Wigtownshire. It was constructed in 1800. A flight of steps leads downward to a small platform, by the water's edge, and the moment the old woman, who was our conductress, showed herself in the act of descending those steps, the whole body of codfish moved toward her, just as a flock of poultry follow a henwife. She had in her had a basin filled with sand-eels and limpets; and when we neared the surface of the pond, and were seen by the fish to be manipulating the contents of the basin, as many as could press themselves close in shore raised their heads, or at least the anterior portion, quite out of the water, opened their mouths wide, and made a gurgling and occasionally a snapping sound, the latter occasioned by the sudden shutting of their jaws, when they felt or fancied that something had dropped between them.

As we stood on the lowest step, *au niveau* of the surface of the water, some of them laid their large languishing faces over our feet, allowed us to put our hands beneath them, and roll them over, or even raise and replunge them—as nurses do children—out of, and then beneath their native brine.

The species were chiefly cod, with a few lithe, a gurnard, and a small grilse, or sea-trout.

We were considerably affected by the tenderness of feeling which seemed to exist between most of these fishes and their ancient feeder. They had entire confidence in each other, and this was, no doubt, the foundation of their mutual respect and happiness, as it is that of all the domestic affection. Tame fish are now quite out of fashion, although we hope that their recent introduction into the vivaria of our zoological gardens may revive the taste. We may add that fish are great favorites in Otaheite. Mr. Ellis informs us that he has frequently accompanied a young chieftain to the side of a hole. So soon as a whistle was sounded, an enormous eel would show itself upon the surface, where it fed fondly and familiarly from its master's hand.—*Blackwood.*

For the New England Farmer.

ON BEES.

MR. EDITOR:—For a few years past I have been happy to observe that in this community there is a growing interest in the raising of *honey* and the domestication of the honey bee, and what has surprised me most is, that so little is said in the agricultural papers and various reports, on this interesting branch of farm economy. In the different Patent Office reports, with one or two exceptions, nothing whatever is said on the subject. In that of 1845 there may be found a short article. What I would like to see is, a series of short, practically written articles on the management of the honey bee. Will not some one of the thousand readers of the *New England Farmer* take this matter in hand and give us the desired information?

Until this spring I had never hardly given a moment's thought to these industrious "little fellows," who, by their industry, economy, contentment and system, put most of us to shame. My first business after receiving my colony, was to make myself as fully acquainted with their history and habits as reading different treatises on the subject could do. But I have not yet been able to procure such a work as I think the novice, like myself, wants. There is no lack of *books*, and some of them, I should judge, safe ones to follow, but out of four different works which I have lately procured, and carefully read, neither of them come up to my ideas of what such a work should be. Instead of a treatise on bees and their management, they are rather a book advertisement of some particular patent hive, and the instructions given are for the use of the hive, and not for the management of the bees, as adapted to such a hive as any common farmer with ordinary ingenuity can construct. All the writers agree that the honey bee can be easily managed, and made profitable, by proper care.—Without intending any disparagement of others, those which come the nearest to what such a work ought to be, I may mention Dr. Eddy's and Mr. Weeks's, yet each was written to promote the sale, probably, of a particular kind of hive. This subject must be a very interesting one to those fully initiated into its mysteries. There are many such no doubt, who read the *New England Farmer*, from week to week. Let me say to such, give us the desired information through the medium of the *New England Farmer*, without any reference to any thing more than the old-fashioned hive, and I,

for one, will hold the writer in ever grateful remembrance. On the management of the honey bee, as adapted to the common box hive, who will give us his experience?

NORFOLK.

June 10, 1856.

REMARKS.—Persons writing upon bees, it is presumed, give the results of their experience, and that experience, now-a-days, is generally with other than the common box hive. Has the writer seen Langstroth's work on the honey bee, which is, perhaps, the most perfect system promulgated. We have had a good deal of experience with bees and hives, and would not any longer use the common box. Eddy's and Weeks's we have not tried. We find nearly every conceivable convenience in Langstroth's.

For the New England Farmer.

WHEAT ON THE POTOMAC LANDS.

MR. EDITOR:—I must be allowed to embrace an occasion to express my entire satisfaction with your useful, interesting and cheap publication, one of great value to every farmer, and especially in New England. No money can the tiller of the soil invest to more advantage.

As I am a farmer, near the Potomac River, on Nanjemoy Creek, in Charles County, I avail myself of the occasion to make a statement to show what our lowlands, in the low counties of Maryland can do. Last year my field of wheat, less than 250 acres, following a corn crop on the same land, produced 3650 bu. of good marketable wheat, 58 lbs. to the bushel, which I sold during the autumn, before the rise of prices, for \$1.92 per bushel. My overseer, a truthful man, in whom I have confidence, has furnished me what he calls "a plot of the piece of land on which the 84 bushels of wheat were made the last season." About one-third of the wheat on the piece fell down in a bloom state, where I consider the yield was not more than half in consequence.

I used guano to advantage on about a third of my wheat field; but not on the 1½ acre lot that made the most productive yield. It had been for many years a peach orchard. I can not pretend to say how many years it had been thrown out of cultivation; but certainly for more than twenty years, during which it has been a clover lot, but rarely if ever grazed. No manure has been put upon this plot for many years.

Respectfully,

BENJAMIN OGLE TAYLOR.

Washington, D. C., June, 1856.

N. B. This year my plantation will not produce half a crop of wheat because of the unfavorable spring, that has been equally if not more destructive along the tide water counties of Maryland, Virginia, and probably as far as the Blue Ridge in Virginia.

☞ The income of Ohio, last year was about four and a quarter millions of dollars, and its expenditure three millions and a half. It has 800 miles of canals, 600 of navigable rivers, and 2000 miles of railroad. Its wheat crop last year was 30,000,000 bushels, and corn 80,000,000.

For the New England Farmer.

SCIENCE AND THE FARMER.

The farmer should understand geology. He should know the composition and structure of the rocks which constitute so large a part of the soil which he cultivates. He should know the nature of the rocks in all the region around him, and what kind of soil they will produce, when worn down by the action of the sun and rain and frost. If the mountains and hills that look down upon his farm contain marble or granite or slate or iron, he should know that these minerals, which have been upheaved from the bowels of the earth, are being annually spread over the valleys and plains that lie at their feet, by the drenching rains and melting snows which wash their declivities. He should know how to select those soils whose mineral composition is best suited to particular crops, and to determine when they contain mineral elements that unfit them for his purposes.

He should know what is a sandy loam, and what a clayey loam, and of what each consists. He should know what is an alluvial soil, and what mineral elements it contains in any given locality.—The farmer should understand the leading principles of chemistry in general, and all about those particular principles that are applicable to agriculture. The earth is not a mere dead mass of matter. It is a vast chemical laboratory, filled with various and strange materials, full of activity and motion, in which composition and decomposition and new combinations are constantly going on. To-day it receives accessions and influences from the heavens, to-morrow it throws off newly-formed elements, that are carried into the oceans, and deposited upon distant shores. The earth is almost a living creature, and when quickened by atmospheric influences, she brings forth innumerable living things, infinitely diversified in form, in hue and fragrance, and each derives from her bosom the nutriment that is suited to its character and wants; truly is she called the mother of all living things. The cultivator of the earth should surely know something of its nature, its elements, its affinities, and its diseases.

The farmer should be a botanist. This is the natural science of the agriculturist. Can he be content to spend his life in ignorance of the names and properties and distinguishing characteristics of the trees and shrubs and flowers that are so lavishly spread around him, painting his fields and woods with their thousand hues, and rendering this outward world a scene of beauty? And how does the seed germinate, and the tender leaf unfold itself? and in what order are the several parts of the flower developed? How is the blossom impregnated and the fruit formed? What will injure and what improve each plant? How may plants be improved by engrafting, by inoculation, by crossing? How may new varieties be obtained, and old ones be made better? Can the farmer be content to leave questions and such as these unanswered?

But vegetable physiology alone should not satisfy him. He has in his charge, and appropriated to his use, some of the noblest animals upon the earth. They are his companions through life, and by their labor, or the products of their bodies, contribute largely to his happiness and comfort. He should make himself acquainted with the structure and uses of their various organs. He should know how

often their hearts beat, and how often they breathe in a state of health, that he may judge how far, at any time, they deviate from the healthy standard. He should know the absolute and relative position of all the organs, that he may the better determine the seat of disease, and with more certainty apply his remedies. He should know how the fat is deposited. How the bones are formed, and how the muscles; and what food or treatment will contribute to the most rapid growth of each; and then the knowledge of different races, and their curious histories, and their several peculiarities, are all highly important to the breeder of stock. The farmer should have a knowledge of the diseases of his animals, and of the proper remedies, and should be able to perform all the more common surgical operations. Many a fine animal has been slaughtered, because its owner could not set a bone, or bandage a wound.

The farmer should carefully observe the habits of animals, birds and insects. Who else has so good an opportunity as he to do this? He should especially study the habits and nature of the insects that are injurious to vegetation, that he may be the better able to defend his crops from their ravages. He can scarcely be expected to be familiar with the whole subject of entomology; but he should carefully study those insects that are found in his own neighborhood, and upon his own premises, and note with accuracy the result of his observations for the benefit of himself and his neighbors.

The farmer should understand the general principles of mechanics, and particularly those that relate to the structure and use of agricultural implements. In ancient times, no man was considered an accomplished plowman, until he could construct his own plow. In modern times, the division of labor, and the use of machinery has rendered this qualification unnecessary. But he should understand the true principle upon which the plow, and every other implement he uses, should be constructed, that he may discover any defects in their working, and be able to suggest any improvements which they need. He should be able to use tools in a workman like manner, and thus save many a blacksmith's and tool-maker's bill, which he would otherwise have to pay. He should make himself familiar with all these, and many other branches of scientific knowledge. The study of these subjects will be to him an unending source of pleasure, and cannot fail to improve and refine all his powers and sensibilities. There is no branch of knowledge that will not be serviceable to him. There is none from which he cannot derive some hint or some law that may be applicable to some one of his varied pursuits, and they will all tend to refine his feelings, to enlarge his intellect, and to elevate him in the scale of being; and there is scarcely a branch of physical science that may not be made to put money into his pocket, if this is the leading object which he is pursuing.

When our young farmers shall all be well instructed in the general principles of scientific knowledge, individuals among them will acquire and develop a taste for special scientific pursuits. One will become distinguished as a geologist, another as an agricultural chemist, a third will acquire fame as a botanist, and a fourth as an entomologist; a fifth will be distinguished as an inventor of agricultural implements. Another will obtain a fortune for himself, and confer inestimable

benefits upon his country, by the introduction of new varieties of plants and fruits, while another will devote himself to the introduction of new breeds of animals, or to the improvement of those already existing. If our farmers would become self-instructors, and study and think for themselves, no profession would be more honorable, or have more weight in society, or be more eagerly sought after by the active and intelligent of all classes.—Farming would cease to be mere drudgery, and those who pursue it, to be “of the earth, earthy.” All farm operations would be based upon scientific knowledge. New principles, new processes, and important and valuable results would be brought out that would confer fame and fortune on their discoverers, and great benefits upon the human race. We should have farmers who would be known as the authors of valuable works, farmers who would achieve a high rank in intellectual improvement, which would fit them for the most honorable and dignified positions in society. R.

SEA WATER, AND A COTTON SHIRT !

Between sea-water and a cotton shirt there is a very close affinity; and yet, how few men who wear shirts made of cotton, and how few of their wives clothed in the same material, see the intimate relation that subsists between the various salts of the ocean and the great staple of the South? Most persons know that an oyster is nutritious food, and that it grows in salt water; but why this same oyster yields a manure worth ten or twenty times more than that of a pig fed on corn, of a like weight, how few understand? Fish are the food of birds whose excrements constitute commercial guano; and fish themselves have been used for indefinite ages to fertilize the ground cultivated by man. But 100 pounds of dung formed exclusively of fish, dry weight, is worth two or three hundred pounds of the same fish for manure before they were eaten by birds. This is an important fact, and one that points to the *why* guano is so valuable. Fish part with a large share of their carbon and elements of water in the systems of birds that digest them, so that four hundred pounds of fish, dry weight, yield only one hundred pounds of dry guano. The latter contains nearly all the nitrogen and phosphates, soda, lime and magnesia, which the fish possessed; while the combustible carbon and hydrogen in the fish were literally burnt in the bodies of the birds to keep them warm. In this way nature concentrates fertilizers, and thereby greatly facilitates their cheap and extensive distribution for agricultural purposes.—*Dr. Lee.*

THE HAMMER.—The hammer is the universal emblem of mechanics. With it are alike forged the sword of contention and the plowshare of peaceful agriculture. In ancient warfare, the hammer was a powerful weapon, independent of the place which it formed. The hammer is the wealth of nations. By it are forged the ponderous engine and the tiny needle. It is an instrument of the savage and the civilized. Its merry clink points out the abode of industry: it is a domestic ditty, presiding over the grandeur of the most wealthy and ambitious, as well as the humble and impoverished. Not a stick is shaped, not a house is raised, a ship floats, or a carriage rolls, a wheel spins, an engine moves, a

press speaks, a viol sings, a spade delves, or a flag waves, without the hammer. Without the hammer, civilization would be unknown, and the human species only as defenceless brutes; but in skilful hands, directed by wisdom, it is an instrument of power, of greatness and of true glory.—*Farmer and Mechanic, Nashville, Tenn.*

For the New England Farmer.

PULVERIZED GRANITE AS A MANURE.

BY PROF. J. A. NASH.

MR. BROWN:—An excellent farmer from a neighboring town recently called on me to inquire whether granite, reduced to a powder, would not be a good fertilizer, by reason of the alkalies contained in it, especially in the felspar and mica.

His reasoning was, that wood ashes prove an excellent manure for nearly all soils in this region; and that felspar and mica contain the very ingredients to which we ascribe their benefit, in still larger proportions than ashes. I told him that experiments had been made with the fine dust of stone-yards, where granite only had been hammered, and that good results were said to have followed; but that I knew not how carefully the experiments had been made, I could not say how much was due to the granite dust, or how much to extraneous matters that might have accumulated with it.

He stated, that on his farm, and generally in that neighborhood, are large masses of granite, that could be spared as well as not, consisting largely of felspar and mica, with very little quartz; that it is of a crumbly nature, and could, in his opinion, be reduced to a fine powder at very little expense; and that he believed the value of it, as a fertilizer, would be equal to that of wood-ashes. He was desirous that attention should be called to the subject, and it is at his request that I write, hoping rather to elicit information on the subject, than to give it.

Granite differs greatly in its composition. Some specimens consist largely of quartz, which is nearly pure silica (flint sand,) and consequently would possess no value for ordinary soils. Others consist largely of felspar, known by the resemblance of its fracture to that of china ware. Mica (known sometimes as isinglass) is the third ingredient of granite. In some specimens, albite, which is a silicate of soda instead of potash, takes the place of felspar.—In others, hornblende, containing considerable amounts of lime and magnesia, takes the place of mica, as the Quincy granite, more properly termed sienite.

An average sample of granite might consist of something like two-fifths quartz, two-fifths felspar and one-fifth mica. According to Dana, (Muck Manual, page 50, fourth edition) felspar contains 67 per cent. of silica, 17½ of alumina, 12 of potash and 1½ of lime. This then is a silicate of alumina and potash, with a little lime. Gray mica, according to the same authority, contains 51 per cent. of silica, 21 of alumina and 10 of potash, showing it to be a silicate of alumina and potash without lime. He makes brown mica to contain 40 per cent. of silica, 22 per cent. of alumina, and 4½ per cent. of potash or soda.

According to these figures, were many samples of granite taken at random, and so mixed as to

produce an average, we might expect to find in a hundred pounds of the mixture, something like 75 pounds of silica, 12 pounds alumina, 6 pounds of potash, 1 or 2 pounds of soda, a little lime, oxide of iron and other unimportant matters. The last samples, such as our friend speaks of, consisting largely of felspar and mica, with only scattering grains of quartz, might be more than twice as rich in the alkalies. If so, they would contain, to the one hundred pounds, at least 12 pounds of alkali. It is manifest that the silica would possess no value, unless for amending clay or peat lands, and for that purpose it could be had at a cheaper rate, in the form of sand or gravel. The alumina would be of a little value for amending sandy soils provided there were no clay beds near, as 40 pounds of alumina are equal in retentive power to 100 pounds of clay, pure clay being a silicate of alumina, 40 pounds of the former to 60 of the latter. The principal value of the granite dust would be in the alkali, say from 6 to 12 pounds to 100 pounds of the crushed granite.

It should be considered that the potash spoken of above is not the carbonate of potash, such as can be procured for agricultural purposes at 7 or 8 cents a pound. It is nearly twice as valuable as carbonate, provided that it will operate as promptly. My impression is, that the potash, in the form in which it exists in crushed granite, will act surely, that the plants will gradually take it up, but not as promptly as when applied in the form of a carbonate, as in the potash of ammonia, or in unleached ashes. But it would seem that a bushel of crushed granite would contain quite as much alkali (if it were of the felspathic kind, more than twice as much) as a bushel of wood ashes. Could any inexpensive way of crushing it be devised? The Californians make out to crush a kind of quartz rock far harder than our granite, but perhaps they see more gold in the quartz than the farmer does in his crops; and we have heard that "money makes the mill go," or something like it. One thing is certain; if it should turn out that granite is a good manure, New England would have a right to be the richest country in the world. Let us hear from any who have tried it. Our mechanics would be glad to be constructing the mills to crush it, should it appear that they will be wanted. In cases where it has been applied with good effects, was it applied unmixed with other matters, or after it had lain for years and become enriched by various mixtures? We want to know all about it.

J. A. N.

For the New England Farmer.

SPONTANEOUS COMBUSTION.

MR. EDITOR:—A few weeks ago, I saw an article going the rounds of the papers, stating that if cotton cloth which had been saturated in oil, was exposed for a given length of time to the direct action of the sun's rays, spontaneous combustion would take place. Allow me to present a case which may, in the main, substantiate this statement; and, as facts are everything in this day of theories, may serve to give to it additional weight.

Some years since, a little sister came running into the house, full of excitement, declaring that she certainly "smelt fire in the barn chamber." We hurried out into the finished loft of a large barn, and commenced an anxious search, for the smell of

burning cotton was distinctly perceptible as soon as we entered. After a general overhauling of old rubbish, we discovered the fire in one of the barrels in which we kept our waste rags. Some ways down in the barrel, and under other rags, was a large piece well on fire, smouldering like tinder. I examined the piece and its situation with care, to learn the origin of a fire in so strange a place. There was nothing on which to ground the least conjecture, excepting the fact that the piece on fire smelt of oil, and what remained of it appeared oily. Now whence came the fire? It is my impression that nothing had been emptied into the barrel for some days previous; the barrel itself was close under the eaves, though the sun—it was summer—could have no direct access to its contents. No child was ever allowed to play with a match about our premises, and no family could be more careful in the use of them. These are the facts, and others may draw from them what inferences they may, but for ourselves, we made a standard rule in the family, never for the future to drop anything into the rag-bag containing a particle of oil, but to deposit such refuse in the proper place for combustion—the fire-place. Now it does not seem to my mind at all improbable that some of the incendiary fires which are charged against the morals of the community, may have an origin similar to this; for we know that oiled rags are frequently thrown as nuisances into out-of-the-way places, or dropped into the general deposits for waste cotton material; and by-and-by, it may be that some thousands of property are suddenly annihilated, and the public mind is shocked, and nervous people are alarmed at the presence of some unprincipled incendiary in their midst. We hope that every prudent householder will look to it, that there may be no such incendiary lurking about his premises.

J. G.

For the New England Farmer.

SAVE YOUR BACON.

About a couple of years ago, we were entertained at the house of a friend with a good, old fashioned dinner of eggs and bacon. We complimented our host on the superior quality of his bacon, and were curious to inquire the way to like success in the preparation of a dainty article of diet, though one that is better fitted for the palate of an epicure than for the stomach of a dyspeptic. To our surprise we were informed that that portion of our meal was cooked eight months before. Upon asking for an explanation, he stated that it was his practice to slice and fry his bacon, immediately upon its being cured, and then pack it down in its own fat. When occasion came for using it, the slices slightly refried, had all the freshness and flavor of new bacon, just prepared. By this precaution, our friend had always succeeded in "saving his bacon," fresh and sweet, through the hottest of weather.

J. G.

Marblehead.

LOVE FOR TREES.—We love trees. They seem like things of life. They stand like sentinels while we sleep, and whisper to us through the day. It seems as though they were our kindred, and we hold converse with them as we watch their swaying branches through the long summer days.

BESSIE.

Bessie wears a gown of red,
A homespun gown and apron blue;
She has no hat upon her head,
And her wee brown feet are without a shoe.
Bessie has hair like the sunset's gold,
And her eyes were born from the deep blue sea;
In their depths a story is told—
I love Bessie and she loves me.

Bessie's hands are hard with toil,
And her cheeks are dark with the wind and rain;
But her lips are rich with the rosy spoil,
That if once I taste, I must taste again.
Bessie has ne'er a silken gown,
Nor a crimson hat nor a necklace fine;
But she wears of cowslips a golden crown,
That I'd rather than any queen's were mine.

Bessie dwells in a lowly cot,
A lowly cabin with trembling walls;
'Tis old and poor, but she thinks it not,
And loves it better than lordly halls.
She counts the stars as she goes to sleep,
And loves to listen the pattering song,
That o'er her head the rain-drops keep,
In the April weather, all night long.

Bessie's step is like the fawn's,
Her voice like the chiming of silver bells;
I hear it oft in the summer morn
But I dare not whisper what it tells!
Lingering and dying round my heart,
Ever and ever its echoes be;
Who shall divide us, or who shall part?
I love Bessie and she loves me.

BEAUTIFY YOUR HOME.

Every man should do his best to own a home. The first money which he can spare ought to be invested in a dwelling, where his family can live permanently. Viewed as a matter of economy, that is important, not only because he can ordinarily build cheaper than he can rent, but because of the expense caused by a frequent change of residence. A man who early in life builds a home for himself and family, will save some thousands of dollars in the course of twenty years, besides avoiding the inconvenience and trouble of removals. Apart from this, there is something agreeable to our better nature in having a home that we can call our own. It is a form of property that is more than property. It speaks to the heart, enlists the sentiments, and ennoble the possessor. The associations that spring up around it, as the birthplace of children—as the scene of life's holiest emotions—as the sanctuary where the spirit cherishes its purest thoughts, are sure as all value; and whenever their influence is exerted, the moral sensibilities are improved and exalted. The greater part of our happiness of today is increased by the place where we were happy on yesterday, and that, insensibly, scenes and circumstances gather up a store of blessedness for the weary hours of the future! On this account we should do all in our power to make home attractive. Not only should we cultivate such tempers as serve to render its intercourse amiable and affectionate, but we should strive to adorn it with those charms which good sense and refinement so easily impart to it. We say easily, for there are persons who think that a home cannot be beautified without a considerable outlay of money. Such people are in error. It costs little to have a neat flower garden, and to surround your dwelling with

those simple beauties which delight the eye far more than expensive objects. If you will let the sunshine and dew adorn your yard, they will do more for you than any artist. Nature delights in beauty. She loves to brighten the landscape and make it agreeable to the eye. She hangs the ivy around the ruin, and over the stump of a withered tree twines the graceful vine. A thousand arts she practices to animate the senses and please the mind. Follow her example, and do for yourself what she is always laboring to do for you. Beauty is a divine instrumentality. It is one of God's chosen forms of power. We never see creative energy without something beyond mere existence, and hence the whole universe is a teacher and inspirer of beauty. Every man was born to be an artist so far as the appreciation and enjoyment of beauty are concerned, and he robs himself of one of the precious gifts of his being if he fails to fulfil this beneficent purpose of his creation.—*Southern Times.*

HAY CAPS.

The importance of the hay crop, and the short time in which it is necessary to secure it, demand that every precaution should be taken to prevent delay or losses in harvesting it.

With the almost uniformly dry months of July and August, as we have had for three years past in this region, the haymaker may say, perhaps, that coverings for the protection of his hay-cocks are unnecessary. But there are sections of country every summer, where the "weather is catching," and large quantities of hay are ruined or much injured. After the grass has been made nearly ready for the barn, the loss is not that of the grass alone, but of the labor also that has been bestowed upon it, and which has now become a part of the value of the crop.

Besides, if there is a way to protect the partially made crop out of doors, it prevents many tons from being injured after being taken in. When the rain comes, the length of its duration is uncertain, and the farmer will often hurry in hay that is not sufficiently cured, and that will heat and become musty in the barn. And then there springs, both from the wetting and the moulding, a disappointment and uneasiness of feeling, that should be avoided, if it can be done without too expensive an outlay.

Again, in curing hay, it is sometimes absolutely necessary that it should remain out two or three nights, and there is too much risk without some protection of the cocks.

A simple, cheap, and thoroughly effectual remedy against losses by wetting hay, may be found by using sheeting a yard wide, and sewing two pieces two yards long, each, together; hem the edges; turn down the corner an inch, and then that turn another inch, and sew it down strong. This will form a loop, into which a strong twine must be placed. When the cap is thrown over the cock,

thrust a pine pin about a foot long through the string at each corner, and up into the hay, which will keep the cap in place, unless the whole cock is overturned.

Your cap, made as above, will be two yards square, which will be sufficiently large to cover half or two-thirds the way down of a common cock; beyond this the rain will do no harm, as the water will not penetrate the hay.

Good firm sheeting, worth eight to nine cents a yard, will shed the rain from the hay through a storm of three or four days' continuance; and the caps will last a lifetime by taking good care of them when not in use.

Take a light nail cask and make a bail to it from part of a hoop, to keep and carry the pins in, and you are then provided with a remedy which will pay its cost in a single season of "catching weather."

Caps may be found ready for use at Nourse, Mason & Co.'s store, Quincy Hall.

For the New England Farmer.

BREEDS OF POULTRY.

MR. EDITOR:—There is no one subject perhaps, connected with farm economy, upon which a greater diversity of opinion exists, than the superiority of the different breeds of poultry. The popularity of the ostrich raced Shanghaes and their compeers is deservedly at an end. With some, the Bolton Grays are a sine qua non; others advocate the black Spanish; while some avow a prejudice for Dorkings and Polands. If we drop the pure bloods and descend into the mixed breeds, we also find a variety of opinions. Some advocate yellow legs, others blue, and all can produce quite a formidable array of statistics to prove the excellence of their favorites.

I am not sure that we have greatly improved upon the type so eloquently given by Dryden, which I take the liberty of transcribing for the benefit of your readers to whom it may not be familiar.

"High was his comb and coral red withall,
In dents embattled like a castle wall,
His bill was raven black and shone like jet,
Blue were his legs and orient were his feet,
White were his nails like silver to behold,
His body glittering like the burnished gold."

Now I doubt whether the most enthusiastic admirer of any breed can give us a description exceeding this. Be this as it may, however, after a somewhat extensive experience, I have come to the conclusion, that, take them for all in all, the grey Dorkings and the Games are the best birds for this climate. The former are larger and harder than the white Dorkings, are remarkably full breasted, and are excellent layers. The Games are the hardiest of all, approaching, perhaps, more nearly to the wild breed than any other. Out of a great number hatched last spring, I do not remember losing one by disease. For splendor of plumage, they are altogether unapproachable, and I am convinced that few surpass them in laying qualities, while the delicacy of their flesh is unrivaled.

Dartmouth, 1856.

J. R. S.

For the New England Farmer.

THE VALUE OF LAND.

We last spring told our neighbor and highly esteemed friend, who has many a time represented his town in the Legislature, filled county offices of trust and honor, and who owns a very large farm, that we had made a purchase of real estate. "How much land have you bought?" was asked. Two and a half acres, fenced with stone wall, no stones remaining on the surface of the ground, with over fifty apple trees upon the same, was answered. "How long have the trees been transplanted?" Four years. "How much did you pay for the land?" Two hundred dollars an acre. Shaking his head, "no land is worth two hundred dollars an acre for cultivation." We informed him that it was worth that for building purposes, and he shortly after took his leave.

The land was in grass, except a strip on one side of the field containing one row of trees which were full twice as large as the other trees, which had been only imperfectly dug around. This was taken as conclusive evidence that trees thrive better when cultivated around.

Not wishing to plow the whole field, having no manure to apply, a strip was plowed around each tree nearly a square and planted to potatoes. What slight pruning the trees needed was attended to, and they were washed twice during the summer. The last of April they were washed with strong suds and sal soda; the first of July they were washed with potash water not quite strong enough to bear an egg. The land had received no manure or other fertilizer for many years. The following is the result:

To plaster and ashes.....	Dr.	\$3.50
To labor, seed, &c.....		18.22—\$21.72
By hay standing, 3480 lbs. sold for.....	Cr	\$20.00
By crop of potatoes, &c.....		13.72
Growth of 54 trees, 83½c.....		18.00—\$51.72
		\$30.00

The growth of the trees I set down at two shillings each, not that I thought that a fair price, but because that amount made thirty dollars the interest of five hundred dollars one year. Mr. Sheldon, of Wilmington, remarked at a Legislative Agricultural meeting that "a good tree, set one year, is worth a dollar; it will increase a dollar a year for the next nine years, and in the next twenty years it will pay the interest of that ten dollars and the principal also."

There are many, doubtless, by high cultivation and great care, verifying the truth of the above statement. Would for their own interest there were more such.

However cheap land may sell in the inland towns of New England, there is undoubtedly much land that pays the interest of two or three hundred dollars an acre, and if put on an equal footing with bank, railroad and other stock, would be worth that.

YEOMAN.

Brookfield.

☞ An editor out West says—"If we have offended any man in the short but brilliant course of our career, let him send us a new hat, and say nothing more about it."



BEURRE CLAIRGEAU PEAR.

THE BEURRE CLAIRGEAU PEAR.

The pear, finely represented above, was grown and furnished us by ANDREW LACKEY, Esq., of Marblehead, who has kindly supplied the subjoined description.

MR. EDITOR:—The Beurre Clairgeau, all things considered, is without doubt one of the most promising pears that has been introduced into the country for many years. It was originated at Nantes, France, by M. Clairgeau, and was first introduced here in 1848. Its early bearing and wonderful productiveness will make it a general favorite. It is a rapid grower, either on pear or quince. On the latter it is apt to overbear; and unless the fruit is thinned, and considerable pains taken with the tree, its energies will soon become paralyzed, if not exhausted. I have a tree of this variety which has been in bearing four or five years; have thinned the fruit every year until the last, when I neglected to do it; the consequence was, I was compelled to head it in very severely. On the quince, it commences bearing the second year from the bud, and a number of pear stocks engrafted with it last season, (although they made a rapid growth) have their tops covered with fruit buds. One remarkable characteristic of this tree is, that nearly every blossom produces a perfect fruit; and the stem clings with such tenacity to the tree that it is seldom blown off by high winds. Two years ago, I raised a crop of this fruit, part of which was gathered October 1st, the remainder were picked November 1st; the latter ripened November 28th, and were cut in the presence of good judges of fruit, and pronounced by them first-rate. The others kept till the 10th of January, and were not so good. In Salem, last season, fine specimens of Beurre Clairgeau and Beurre d'Anjou were eaten at the same time, and the merits of each compared, and the result was in favor of the former. Some specimens raised in the vicinity of Salem did not answer expectations. It was probably owing to the overbearing of the trees. The best way to treat this variety is to prevent its bearing for a number of years, until of sufficient size. It will then be capable of bearing good specimens; and the flavor will be much better than those grown on trees two years from the bud. The pear from which the engraving was taken, was one of four, grown on a tree three years from the bud. It is a very showy fruit, of a yellow russet color, with a splendid red cheek on the sunny side.

How it will answer for orchard culture, worked on the pear, time alone will determine. It has withstood the last winter remarkably well, and I think is as hardy as most trees of this species.

Yours truly, ANDREW LACKEY.

FINALITY ON CANADA THISTLES AND WHITE DAIBIES.—A friend informs us on the authority of

Williard Day, Esq., of Brooklyn, that these nuisances may be *destroyed by once mowing*, if done *during a warm rain*. Mr. Day has satisfied himself of this by repeated successful experiments. The principle of its action, no doubt, lies in the decay of the roots consequent upon the filling of the hollow stems with water.—*The Homestead*.

For the New England Farmer.

GRANITE BOWLERS:

A PRACTICAL WAY TO REMOVE THEM.

Many ingenious theories have been educed, as to the time when, and the manner how, these fragments of granite stones were scattered over the New England States, and many other parts of the world.

Some geologists think they were brought at the time of the flood; frozen to large pieces of ice, as we often see small stones in the ice of our rivers. From the direction of the various strata of the earth, they argue that a drift has sometime swept over it, from north-west to south-east, and at that time, the boulders were taken from their parent quarries, and scattered over the land. In corroboration of this hypothesis, is the well-known fact that granite boulders are found in large quantities to the south-east of quarries of that stone.

But it is of little consequence to the farmer, whose arable lands are encumbered with these boulders, whether this or other theories be true or false. He wants to understand a practical way of removing them. The following is a cheap and expeditious method of breaking them, when large.

First, remove all the earth from around them, as low as the bottom of the boulder; this being done, kindle a fire upon its top, or side, as is most convenient. In a short time, thin scales of the stone will be detached under the fire; these must be removed, and the fire kept burning. The heat expanding the stone and converting the moisture it contains into steam, will open one or more seams; now with a sharp crow-bar, the seams are widened by well-directed and energetic blows, and in a short time the mammoth boulder is broken into pieces that may be easily removed.

This method is much cheaper, requires less skill, and is less dangerous than blasting. Coarse and refuse wood, of little value, may be used. Any man can do the work, tending from six to ten fires at a time, and will find it hard but exciting business. Do not throw water upon the stone at all, but keep up the fire, and you will not fail of success.

J. R. W.

Springfield, Vt., 1856.

SALTING HAY.—This practice—we have reason to think—is greatly overdone. *Two quarts* of fine salt to each ton of hay, scattered through it, is sufficient. It is a wasteful thing to get hay in half made and then attempt to save it with salt. Too much salt is as injurious to cattle as for them to go without any.

☞ A decision has been made by the Supreme Court of Alabama, by which every railroad, steamboat, or stage, is liable to the owner of any slave absenting himself from his owner, who may be found traveling with them under any disguise or concealment.

For the New England Farmer.

FARM BUILDINGS.

EXTRACTS FROM THE RECORDS OF THE CONCORD FARMERS' CLUB.

F. G. Pratt said, the main object to be kept in view, in erecting farm buildings was, to adapt them as perfectly as possible to the uses for which they are intended. He thought the Shaker barn at Harvard a good pattern—one important feature of which is that of the elevated drive-way for hay, by which much of the hard labor of pitching up is saved, as well as much time; time, too, when the minutes are precious.

Charles B. Clark said he would prefer to have the stable separate from the barn where the hay is kept.

W. D. Brown said he had always been accustomed to a poor barn, but lived in hopes of a better. He thought there was no necessity for so many buildings as we sometimes see on farms—one for stock, one for tools, one for carriages, another for grain, another for the pigs. He was glad to see that modern barns are becoming larger and more comprehensive in plan. There was great economy in large barns, built so as to include all needed accommodations for cattle, carriages, grain, tools, &c. He thought hay was often injured by gases rising from the manure in the cellar. To prevent this, the hay should not come down to the floor. He would like to have his barn face to the south, and then would arrange the interior thus: on the north side he would tie his cows, on a floor 4 ft. 4 in. long; for oxen, 5 ft. or 5 ft. 2 in.; would fasten cows with stanchions, giving each cow a little more than 3 ft. of room—but oxen need more freedom to move, and he would tie them with chains. There should be a trench behind the cattle 4½ or 5 in. deep, and 12 or 13 in. wide, and a scuttle with hinges to let the manure down. On the south side of the barn he would have horse-stalls, carriage-room, tool-room, vinegar-room, &c. This arrangement would effect a complete cut-off between the cellar and the hay. Under the horse-stalls he would keep his swine, and feed from the floor of the stalls—the trough by means of a pulley to be raised up for convenience of cleaning, filling, &c.

John Reynolds thought the trench behind cattle should be 22 or 24 inches wide. With that width the platform is kept dry and clean.

J. B. Moore did not think a platform 4 ft. 4 in. wide, long enough for large cows; 4 ft. 6 in. wide would be better; and there should be a crack in the trench to let off the water.

John Reynolds expressed a decided preference for keeping cows in a barn separate from that in which hay is kept. Would build on to the hay-barn an L for cows, and separate by a sliding door. Would have the L, 36 ft. wide, well ventilated on the roof, and the cows arranged on both sides. The cellar should be ventilated by two chimneys leading up through the roof; the gases damage the building as well as the hay.

J. B. Moore has not found his hay damaged by the manure in the cellar. No farmer can afford to let the gases escape so freely—he should use proper absorbents. He would not build with matched boards—thought hay more likely to be injured, than when the cracks are larger, and admit a freer circulation of air to dry up the moisture.

J. B. Farmer asked if hay was not full as likely

to be damaged by vapors from the cow stalls as by gases from the manure under the barn? He thought, if the floor was tight, the manure would not injure hay that was well cured before it was housed.

Jos. D. Brown did not think his hay had been injured by manure in the cellar of his barn. He thought it would injure the health of cattle to crowd them into a small space; they need large room and good air. He thought that Wm. D. Brown's plan of tying cows on the north side of the barn, might do for dry cows, but he would prefer to have his milch cows on the south side.

John Reynolds introduced to the meeting Mr. Hammond, of Grafton, who has had much experience in the subject of Farm Buildings.

Mr. Hammond said he had been engaged for a number of years, in different towns and States, as an architect for farm buildings. Has found great difference of opinion as to the arrangement about the barn—there was need of better models. His own experience was decidedly in favor of separating the cattle-room and the hay barn; is satisfied that hay is injured by manure in the cellar under it.—The gases injure the lower timbers; had known timbers in barn-cellars rotted in six years. Hay is as likely to be injured as timber. Barn-cellars should be thoroughly ventilated by pipes leading up through the roof, and absorbents should also be freely used to secure the ammonia. By actual experiments it was proved to him that it was less labor to feed cattle in a separate room, than in the usual manner, when the cattle and hay were together. He moves the hay to the cow-house on a truck. He considers ventilation of the cattle barn very important. Has windows every ten feet behind the cows, with blinds, which, when the windows are open, give the cool air an upward motion, and thus prevent its blowing directly on the cows. Over the pitch-holes in the upper scaffolding, he has a ventilating sash in the roof by means of which he can regulate the temperature of the barn, and keep it a little above the freezing point. In his barn for the last five years, it has not frozen five feet from the door. Cows give more milk in this equable, moderate temperature. He would not match the boards for the walls of his hay-barn, but would have a tight floor. If possible, would arrange the drive-way sixteen feet above the lower floor, so as to pitch the hay down, instead of up. In proof that hay is injured by keeping the cattle and manure under it. Mr. Hammond stated that four men undertook to compare his hay with that of some of his neighbors. They found his hay perfectly bright and sweet, while that in four other barns examined, built in common style, was all more or less damaged—though a part of it was mowed and got in the same day as that which was examined of his own, and they estimated that his hay was worth three dollars a ton more than the other lots. In well-ventilated barns, in barns where there are cracks between the boards, hay will keep better, he said, than in barns built with matched boards or clapboards. If the barn is tight, the hay will be musty.

Jos. D. Brown asked if hay that was stacked in the field in such a way as that no rain could get into it, was better than that kept in tight barns? He did not believe it was; and he thought hay would keep as well in barns built with tight walls, as in those built more openly—that the dampness which is condensed on the walls, and sometimes shows in frost on the roof, is caused by the stock.

Mr. Farmer said there was much difference of opinion and practice on curing hay. Whether the hay is damaged or not in the barn, depends a good deal on its condition when brought in. He got in some last year rather damp in bad weather, and it became quite musty. The main trouble arises from getting it in too green.

Mr. Hammond said the exposed timbers of a barn often presented a deceptive appearance. He had frequently examined barns, and found the lower timbers unsound, though looking well on the outside.

J. B. Moore said he had recently had occasion to drive some spikes into the timber in his barn-cellar, and found it hard work to get them in. The timbers were of oak. He thought it poor policy to put any but the best and most durable timber in such places. He keeps his cellar doors open in summer.

Dea. Wheeler said he had one of the first barn cellars built in Concord—built in 1832. Under his barn the timbers are as sound as when first put in.

Mr. Hammond recommended beveled girths, so that the water should be made to run off outside; has had hay injured three feet from the wall, when the hay happened to lie so as to turn the water inward. Rain drives into a barn worse if the boards are put on horizontally, than if perpendicularly. He would have rows of lights on both sides of the barn. He described a Shaker barn which he had assisted to arrange. It is 100 ft. long, 44 ft. wide, with 26 ft. posts; drive-way floor 18 ft. above the sill, built on a side-hill. The cattle are tied in two rows across the barn, facing each other, 12 ft. apart. There are pens for turning cows in loose, calf-pens, &c. The platform on which the cattle stand varies in length from 4 ft. 5, 4 ft. 7, to 4 ft. 10. The trench behind them is 22 in. wide, and 5 in. deep. They put dry absorbents in the trenches. Mr. H. said he would have all absorbents used for this purpose as dry as possible. A cubic foot of dry pulverized peat or loam, will absorb three gallons of liquid, and when so saturated, is much more valuable than the same quantity of the solid excrements of cattle. The stanchions pitch forward 5 in.—the crib is placed inside. The platform on which the cattle stand, is sloped $2\frac{1}{2}$ in., and he would give the same pitch to the platform of the horse-stalls. The platform should have a good strong floor under it; valuable animals are often lost or injured by insecure floors.

C. B. Clark thought there should be no slope to the platform for horses. M. P.

HOW MUCH DEPENDS ON A LATCHET.

Our farmer friends should remember a quotation, which we find here from M. Say, showing how much depends on a latchet.

"Being in the country, I had an example of one of those small losses which a family is exposed to through negligence. For the want of a latchet of small value, the wicket of a barn-yard leading to the fields was often left open. Every one who went through drew the door to; but as there was nothing to fasten the door with, it was always left flapping; sometimes open and sometimes shut. So the cocks and hens, and the chickens, got out and were lost. One day a fine pig got out and ran off into the woods; and after the pig ran all the people about the place—the gardener, and the cook,

and the dairymaid. The gardener first caught sight of the runaway, and, hastening after it, sprained his ankle; in consequence of which the poor man was not able to get out of the house again for a fortnight. The cook found, when she came back from pursuing the pig, that the linen she had left by the fire had fallen down and was burning; and the dairymaid having, in her haste, neglected to tie up one of her cows, the cow had kicked a colt, which was in the same stable, and broken its leg. The gardener's lost time was worth twenty crowns, to say nothing of the pain he suffered. The linen which was burned, and the colt which was spoiled, were worth as much more. Here, then, was caused a loss of forty crowns, as well as much trouble, plague and vexation, for the want of a latch which would not have cost threepence."

M. Say's story is one of the many examples of the truth of the old proverb: "For want of a nail the shoe was lost, for want of a shoe the horse was lost, for want of a horse the man was lost."

For the New England Farmer.

SCRAPS—GREEN WOOD.

Last spring, I gave the result of my observation on the use of small potatoes for seed. As the readers of the *Farmer* know, it brought in quite a crop of articles, whether all small potatoes or not. I have endeavored to balance the accounts, and adding my own experience again this year, with small seed, I think the evidence is very nearly well balanced. Judging from all that has been written, I see not why we are not at liberty to use small, if we cannot get large seed, and yet, not lose caste with good farmers.

There is another point, which concerns, not only the farmer, but every other man who uses wood for fuel. This is the use of green wood. Chapter after chapter is written to show that the use of such wood is in all cases productive of loss of heat; and even our popular works on chemistry circulate the same thing. If, on the other hand, you go among our farmers and ask which makes the hottest fire, a given amount of all dry, or of mixed wood, and they will almost uniformly say the latter. Now, how comes it that the two authorities differ so much?

There is doubtless truth in both, and it is from a lack of discrimination of cases, that the former pronounce against book knowledge, and the book men affirm the ignorance of the former. It is from this want of discrimination, that the difficulty between practical and theoretical men usually arises.

The chemist well knows that water does not burn very well as such, but if he decomposes the water, forming oxygen and hydrogen, and then burns them together, he will produce a most intense heat. He also knows that a high heat will decompose water, and that if it is decomposed in that way, they will again unite and increase the heat. If carbon be present, a strong light will also be formed. The result of this union of the elements of water with carbon, many a one has seen to their own discomfort, when they have attempted to put out burning fat with water. The flame went to the top of the room, while the heat kept them at a respectful distance. The water was decomposed by the heat of the burning fat, and its elements uniting, made an intense heat.

The blacksmith understands the fact, but is ignorant of the reason, when he puts water on his fire to make a great heat, as he often does. Then, too, the heat of the burning coal decomposes the water and the same result follows as before. In the same way with green wood. If a hot fire is to be kept up, the decomposition of the water of the green wood will add to the heat; while the quantity of wood consumed will be less than if all dry was used. As to the value of green wood, or rather, the amount of combustible material in it, as compared with wood seasoned out of doors at least, there is doubtless more in the former than in the latter. Hence it is that wood should be seasoned under cover.

The cost of drawing wood, all things considered, is probably not much greater green than dry.

By thus considering the circumstances of the case, we reconcile the opinions of practical men with the teachings of science. L. H. N.

MEDICAL USE OF SALT.

In many cases of disordered stomach, a teaspoonful of salt is a certain cure. In the violent internal aching, termed colic, add a teaspoonful of salt to a pint of cold water; drink it and go to bed; it is one of the speediest remedies known. The same will revive a person who seems almost dead from receiving a heavy fall, &c.

In an apoplectic fit, no time should be lost in pouring down salt and water, if efficient sensibility remain to allow of swallowing; if not, the head must be sponged with cold water until the sense return, when salt will completely restore the patient from the lethargy.

In a fit, the feet should be placed in warm water, with mustard added, and the legs briskly rubbed, all bandages removed from the neck, and a cool apartment procured, if possible. In many cases of severe bleeding at the lungs, and when other remedies fail, Dr. Rush found that two tea-spoons full of salt completely stayed the blood.

In case of a bite from a mad-dog, wash the part with a strong brine for an hour, and then bind on some salt, with a rag.

In toothache, warm salt and water held to the part, and removed two or three times, will relieve it in most cases. If the gums be affected, wash the mouth with brine. If the teeth be covered with tartar, wash them twice a day with salt and water.

In swelled neck, wash the part with brine, and drink it, also, twice a day, until cured.

Salt will expel worms, if used in food in a moderate degree, and aids digestion, but salt meat is injurious, if used much.

BLACKSMITHING IN TURKEY.—A correspondent of the *New York Commercial*, writing from Constantinople, gives the following description of the way in which Turkish blacksmiths do their work:

"In passing a blacksmith's shop the other day, I observed an attempt to shoe a mule. The animal was very refractory, and not at all inclined to have any liberties taken with his understandings. After several fruitless attempts to conquer his obstinacy, four Turks took hold of him, threw him down, and ashed his legs to a stick, rolled him over on his back, and put his shoes on at their leisure. It was

a novel but a very effectual method. At best it always takes three men to shoe a horse—one to hold him another to hold up his foot, while a third fastens on the shoe."

LETTER FROM MR. BROWN.

Washington, D. C., June 20, 1856.

DEAR SIR:—It is more than three years since I have visited this city, and during that time marked changes have taken place. The city now has suburbs; we do not dash from the country, or rather, the wild woods and jungle pastures, directly into Pennsylvania Avenue, as we used to some twenty years ago. On every side of the city, there is visible improvement. Some of the lands in the immediate neighborhood, once covered with the decaying flesh and bones of dead horses, together with the garbage of the city, infinitely worse than the contents of Falstaff's buck-basket, are now enclosed, reclaimed, and covered with grass, shrubbery and trees. Roads that were originally projected, but whose boundaries could only be found in some of the dark recesses of the City Hall, have been laid out, graded, and have a "local habitation and a name." In the thickly-settled part of the city the improvements are none the less striking; and in no particular are they more pleasing than in the new style of architecture which has been introduced in some of the more recently erected dwellings. The original style of building here was truly of the "mixed order"—made up of a grand touch of the Gothic and Corinthian, pig-stye, corn-barn and rope-walk. To look at a house in its best face, it was like a book standing on one of its ends, long, high and rakish, causing the beholder to wonder why the first "gust" did not topple it down, until he turns the corner and finds how it is supported by a batch of young houses clustering at its roots. A better taste has been introduced, and its influence is perceptible in every part of the city. With this improvement has sprung up another, not less important than the first,—and that is in the multiplication of fine shade trees and choice shrubbery and flowers. The finest among the gardens I have visited is that of Major FRENCH, a few rods east of the capitol, on soil that I once knew as unkindly and perverse as that of any cold spring land on any hill-side of New England; but now, at this early state, literally covering the earth with flowers, shrubbery and grass, gladdening the eye, and sending blessings on every breeze that is wafted from them to the neighborhood around. No high, tight fence, like that about a country jail, cuts off the vision or obstructs the fragrance that exhales from this delectable spot. If a little one lingers at the gate, it is met with a kindly "God bless you, my child; here, take these flowers, and enjoy them with us." O, if men would but unbutton the great coat of selfishness in which so many of them are

enclosed, and let out their sympathies upon the world, how it would kindle emotions of gratitude and love, and brighten the pathway of the meek and lowly! Mr. CORCORAN, the banker, has a fine garden, but being enclosed with a high brick wall, it sheds no "sweetness on the desert air." He has a fine gallery of paintings, however, open to the inspection of the public, one day in each week. It contains many fine pictures, whose inspection affords gratification to many; but they are not like the pictures of God's handiwork in the garden, that are shut out of sight by the ugly wall.

Downing's genius has given a new creation on the "old fields" that surrounded the Smithsonian Institute, Judiciary Square, &c. Its influence did not stop on the objects to which it was particularly directed. It set a good example, which many have been wise enough to imitate.

The frequent rains of the season have given the country a beautiful aspect. The foliage is clean and heavy. Some of the buttonwoods, so long infected, are covered with luxuriant leaves, and look finely. The grass promises to afford an abundant crop. In Delaware and Maryland, haying is already commenced, to a considerable extent, while hundreds of acres on the way were covered with the red clover in full bloom. Corn looks well, and some fields I saw where it is already a foot in height. The wheat crop also appears well, being already headed out. Strawberries and currants were in great abundance in the Philadelphia market. New potatoes, here, are selling at \$3.00 a bushel, while the second crop of peas is now presented, and are selling low.

While on my way here I had the pleasure of looking in upon the National Convention, at Philadelphia, and was forcibly impressed with the oneness of purpose and the harmony of feeling which prevailed in that assembly. There was nothing like bitterness or discord in all its deliberations. But you have long ago learned its results, and there is no need of my repeating them.

The weather to-day is quite hot—the thermometer in the shade standing at 90°, so that with the plentiful moisture in the soil, vegetation is proceeding with great rapidity.

I shall visit in this region such farmers as are men of progress, and perhaps note my observations for future remark.

Truly yours, SIMON BROWN.

Joel Nouse, Esq., Boston.

FRICTION MATCHES.—The first lucifer or friction matches used were prepared with sulphur, chlorate of potash and gum. The ends of these, when dipped into a bottle containing asbestos moistened with sulphuric acid, took fire at once. Such matches have been superseded by the more simple locofoco matches, which ignite by friction without the aid of an acid. These matches are first dipped

into molten sulphur cooled, then coated with a composition of 16 parts, by weight, of gum arabic, 9 of phosphorus, 14 of nitre, and 16 of fine peroxyd of manganese, and a little sulphuret of antimony. These ingredients are worked up with water to form a thick paste, into which the matches are dipped and then dried. Smalt and cinnabar are employed to color the ends of the matches. Those matches which ignite with a small crackling noise, are prepared with the chlorate of potash. It is a dangerous substance to use in their preparation. When it is employed care must be exercised that the gum paste in which it is mixed with the phosphorus, does not exceed 104° Fah. These matches are dried in a dry and warm (but not hot) room.

On October 24th, 1836, Alonzo D. Philips, of Springfield, Nass, obtained a patent for manufacturing locofoco matches with a preparation of chalk, phosphorus and glue. An ounce of glue is dissolved in warm water; to this is added four ounces of fine pulverized chalk, and stirred until it forms into thick paste. One ounce of phosphorus is then added, and the whole kept a little warm and well stirred until the whole are well incorporated together. Into this the ends of the matches—which have been previously coated with sulphur and dried—are dipped, and then laid in rows on slips of paper cut wide enough to lap over the ends of the matches.—*Scien. Am.*

INDIAN CORN.

The value of this cereal to the country has never been appreciated. Recent investigations and comparisons show conclusively that it is of more value than any other agricultural production, not excepting cotton even, about which so much has been said. The culture of corn has wonderfully increased the last few years; the ratio of increase being far greater than any other product. From 1839 to 1849, as per census returns, the increase was fifty-eight per cent. Wool the next highest, its increase being fifty per cent.; cotton, twenty-four; oats, twenty; and wheat, sixteen. This is a remarkable result.

The cotton crop has not increased half so rapidly as the corn crop, and the claim of the former to the title of "king," is only in its influence upon the commercial interests of the country. The cotton crop of 1851 was nine hundred and twenty-seven millions of pounds, valued at one hundred and twelve millions of dollars, while the corn crop of 1850 was five hundred and ninety-two millions of bushels, which at the lowest possible price at which it can be estimated, is of far greater value than the cotton crop.—*Boston Journal.*

AMERICAN PRIZES AT THE PARIS EXHIBITION.—The Paris correspondent of the *Commercial Advertiser* says the United States drew prizes at the great Agricultural Exhibition for every article that was presented for serious competition, numbering five. Pitt's Buffalo Threshing Machine drew a first class medal, and was sold to the Emperor for 2200 francs; Manny's Reaper drew a first class medal; a barrel of Col. Alston's South Carolina rice, do.; McCormick's Reaper, worked by Frenchmen, a second class medal.

CURE FOR CORNS ON HORSES' FEET.

MESSRS. EDITORS:—I noticed the inquiry of a correspondent in the March No. of *The Cultivator*, concerning corns on horses' feet. In answer I would say, corns of long standing are incurable. Those of more recent date can be helped. The only remedy I know, is the following, viz: Dig the corn out and pour in hot tar. If the horse is flat-footed, be careful about paring the heels—only rasp it carefully, and avoid having the shoe bear on the heel as much as possible. I make a few extracts from Youatt on the Horse, which come directly to the point.

In the angle between the bars and the quarters, the horn of the sole, has sometimes a red appearance and is more spongy and softer than at any other part; the horse flinches when this portion of the horn is pressed upon, and occasional or permanent lameness is produced. This disease of the foot is termed corns. The first thing to be done is to pare out the angle between the crust and the bars. Two objects are answered by this; the extent of the disease will be ascertained, and one cause of it removed. A very small drawing knife must be used for this purpose. The corn must be pared out to the very bottom, taking care not to wound the sole. It may then be discovered whether there is any effusion of blood or water underneath. If this is suspected an opening must be made through the horn, the matter evacuated, the separated horn taken away, the course and extent of the sinuses explored, and the treatment recommended for quitter adopted. Should there be no collection of fluid, butyr of antimony should be applied over the whole extent of the corn after the horn has been thinned, as closely as possible. A horse that has once had corns to any considerable extent, should at every shoeing have the seat of the corn well pared out and the butyr of antimony applied.—*Country Gentleman*.

THE GUANO TRADE.

The New York *Evening Post* furnishes some interesting facts respecting the guano deposits belonging to Peru, and the manner in which the business of removing and disposing of this important fertilizer is conducted. The guano islands (the Chinchas) are about one hundred miles north from Callao, the longest of the group being two miles in length and a quarter of a mile wide, and the least about a mile in length by half a mile in width. There is but little guano on the largest island, while upon the smallest it is two hundred and fifty feet deep. There are often from three hundred to five hundred sail of vessels, generally of large size, loading at one time. At the rate of which guano is now shipped from these islands, it will be exhausted in six to eight years. Twenty thousand tons are sometimes removed in a single day. There is on one of the islands a settlement of Chinese coolies, who are employed in digging the guano and loading the vessels. A task is given them each day, and if the gang fail to get out the given number of wagon loads, of two tons, each day, their bondage is continued a longer period, to make up; so many months or days being added as wagon loads are wanting.

These coolies are cheated into the belief by Mandarins, or knowing Chinamen, that they are to be shipped from China to California and the gold dig-

gings, and are further deceived by the offer of a free passage. The shipmaster takes them to the Peruvian government and sells them for a round sum in the shape of freight money, and they are sent to the guano islands for life or for a term of five to seven years. The Peruvians also send all their prisoners of State, some two or three hundred, into the guano mines, where they are let out to work by day and confined by night.

The guano is hard and can only be broken up with the pickaxe. It is then broken and shoveled into the wagons and rolled through the "shutters" to the vessels. There is no fresh water upon the islands, and each vessel is required to carry a ton of water there for every hundred tons burden of the ship. The oldest captain in the fleet from each nation is appointed Commodore, and hoists his flag as such on his ship, where all disputes are settled. Indeed, the municipal laws of the islands and the fleet are decidedly of Yankee origin. Says the *Post*:

"The islands are about ten miles from the main land, and are composed of new red sandstone. The guano is not all bird dung, but is largely composed of the mud of the ocean; that brought from Peru, is so, at least. When anchors are hoisted into the ship from the holding grounds of vessels along the Peruvian coasts, large quantities of mud, of a greenish white color are brought up, and this mud when dried makes guano equally good with the guano taken from the islands. The birds and seals come upon the islands when the people are not at work, but it does not appear that their dung or decayed bodies are more than a foot deep on any of the islands. The composition taken from the islands, called guano, is stratified, and lies in the same form it did before it was lifted up from the bottom of the ocean. Our informant says that a geological examination of the islands will satisfy any man that the guano ships are bringing away from these islands a very different thing from the dung of birds or decomposed animals.

Gibbs & Bright, of Liverpool, have a lease of the Guano Islands from the Peruvian government for five years, which expires in 1857, but hope to get their lease renewed. This house pays the Peruvian government about \$4,50 a ton for the privilege of taking all the guano from the islands, the government furnishing the men to dig the guano."

GIFFORD MORGAN HORSE.—Is there a horse known as the "Gifford Morgan." If so, by whom owned, and where kept, and what is his pedigree? J. W. A.

REMARKS.—There is, or has been a horse by the above name—but we can give no account of him. Brother Howard, of the *Cultivator*, will be likely to know.—N. E. Farmer.

The horse Gifford Morgan was kept for several of the latter years of his life by F. A. Wier, of Walpole, N. H. He died at the stable of Benj. Gates, in the town mentioned, Oct. 30th, 1850, aged 24 years. He was got by Woodbury or Burbank Morgan, and was the sire of Green Mountain or Hale Morgan, and other well-known horses.—*Cultivator*.

The Essex Agricultural Society have elected Ben Perley Poore to deliver the oration before them, at their annual fair in September, at Newburyport.



WOODWARD'S PATENT WEEDING PLOW.

The implement pictured above we have never used, or seen used, and can therefore only give a description of its services from others, which is as follows:—

The plow is made to run within $1\frac{1}{4}$ inches of the row on the even surface, about $\frac{1}{4}$ or $\frac{1}{2}$ of an inch deep, removing the weeds into the middle between the rows and covering them completely, so that if the weather is wet or dry they are effectually destroyed. When the second crop of weeds come up, the plate on the under side of the plow is moved to the land side, which is run in the middle between the rows, splitting the ridge made at the first time plowing, and the mould board rolls the weeds under the furrow, carrying the dirt up to the plants and covering nearly all those that were left the first time; what few are left should be pulled up or covered without disturbing the furrows next the row, the labor of which is all that is required in addition to what is done with the plow through the season. Ten hours labor of a man and horse

is abundantly sufficient to cultivate an acre of corn after it is planted. It is for sale by H. O. Williams, Sunderland, Mass.

GRAPE VINES IN GARDENS.—Grape vines delight in being well manured, and will not give the best satisfaction without a dry bottom and abundance of rich soil. At this period of the season, those who have trained grape vines in their gardens, should examine them thoroughly, to destroy caterpillar worms while they are small. One may now be found in almost every bud, rolled up in a pellet of fine wool. All the labor thus spent will pay for itself. During warm dry weather, the surface of the ground around the roots of vines should be covered with litter to protect the tender rootlets, that spread out so near the surface.

GIFFORD MORGAN HORSE.—In reply to an inquiry of "J. W. A.," B. H. Andrews, of Waterbury, Conn., states that he has a Gifford Morgan horse at his farm for sale.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 15.

SCOTLAND.

If there is any country which might rebuke and banish the feeling of despair which exists respecting New England agriculture, it is Scotland. Whatever question might be raised respecting the soil of New England, as compared to that of England, none can be raised, as respects natural fertility, when it is compared with that of Scotland.

Within the last century, Scotland was one of the poorest and most barbarous countries in Europe. Its progress in agriculture is so recent, that it can be traced, and its progress seen, which cannot be done in England, where *sunk* capital has accumulated so long. No country owes so much as Scotland to the power of man over nature, except perhaps Holland. Switzerland certainly does not present such obstacles to human industry. The total production of the country has increased in the last century, tenfold and the agricultural products in an enormous ratio. Scotch agriculture is, at this day, in some districts at least, superior to English. In no country, is farming better regulated. It is to the model farms of Scotland, that people send their sons to be taught farming.

Scotland and its adjacent islands contain a total of nineteen million acres, nearly three-fourths of which are absolutely unfit for cultivation; especially the Highlands and islands of the north. There are perhaps five million acres of arable land, in Scotland, of which two millions at least are in meadow and artificial pasture. The Highlands are the country for oats, and grow scarcely any other grain. In the Lowlands, the four year course is generally followed. The products of the soil, vegetable and animal, are about \$40 in value to each inhabitant, in this respect equalling England. Yet but little more than a century ago, famine and periodical scarcity devastated this country.

How comes it that Scotland has so rapidly attained this high production, in spite of the natural infertility of her soil and climate? The answer undoubtedly is, that it is owing to the employment of capital and skill; though you would be told in Scotland, that it was owing to the fact, that the land is held in large properties, there being but 7,800 proprietors in all Scotland. But though large property prevails in Scotland, the farms are not large, hardly middle sized. I cannot help thinking that if the farmers owned the farms, and used the same capital and skill as now, the results would be as great, or greater than now.

The Lowlands yield nine-tenths of the produce of Scotland. Let us enter the undulating country which surrounds Edinburgh, called the Lothians, containing about 1,200,000 acres. Farming here, is certainly not to be equalled. Rents of \$7,50, \$15 and \$25 the acre are not uncommon, the average about \$5,00; and the farmer makes nearly as much profit as the proprietor. The meadows in the neighborhood of Edinburgh are irrigated with the sewerage of the town, and are cut six or eight times during the season. Some of them let as high as \$150 and \$200 per annum, the acre.

A great part of the wheat produced in Scotland is grown in the Lothians, which are now famous for cereal crops. Yet this soil was at one

time reckoned incapable of bearing even rye; only barley and oats were cultivated. It is mentioned that in 1727 a field of wheat of about eight acres, near Edinburgh, was the object of universal curiosity. Now one-fifth of the Lothians, about 250,000 acres, is in wheat, and in good seasons, this crop yields from 30 to 45 bushels the acre. Here, again, it is the Norfolk rotation more or less modified, according to local circumstances, which produces this large return. Why should it not do so in New England? Turnip cultivation, the basis of the rotation, is no where better understood than in the Lothians. A complete system of drainage has existed for a long time past. Every farm, or nearly so, has its steam engine. Stabulation of cattle has been long in common practice. In the county of Haddington alone, which contains not quite 200,000 acres, in 1853, one hundred and eighty-five steam engines, of six horse power each, were employed for agricultural purposes, besides 81 water mills.

See what the system of farming was in former times, in the Lothians, and other parts of Scotland. The lands of a farm used to be divided into what were called in-field and out-field. The out-field portion remained quite in a state of nature, and was used as pasture; the in-field, on the contrary, produced barley and oats, uninterruptedly in succession. A worse system can scarcely be imagined. Fallows are an improvement on this barbarous practice. The starting point in Scotland, from which improvement began, was, certainly, low enough to encourage New England.

Now enter Ayrshire, for I do not mean to give a minute account of all Scotland, but only such an account as will show the New England farmer what Scotland was, and what it now is. "Fifty to sixty years ago, there was scarcely a road which was passable in the whole country," says a local writer. "Everywhere the cottages were built of mud, and thatched with straw, the fire in the center, with an opening in the roof, to serve as a chimney, and surrounded with a dunghill, while the land was covered with all sorts of weeds. The only vegetable cultivated, consisted of a few Scotch cabbages, which, with milk and oat-meal, formed all the food of the population. Successive crops of oats were taken off the same field, as long as it continued to produce anything beyond the seed sown, after which it remained sterile, until it was fit for producing another miserable crop. The cattle were famished in winter, and when spring arrived, could scarcely rise without assistance. There was not a farmer with money sufficient to improve this state of things, and proprietors had not the means, either." Can so disheartening a description be given of any part of New England?

Ayrshire now ranks among the most flourishing districts of Great Britain. The increasing demand for dairy produce has created the fine breed of Ayrshire cows, and has changed those ancient heaths into profitable pastures.

The further we go north, richness decreases, but draining, the cultivation of turnips and forage crops, extra manures, subsoil plowing, and liming, everywhere convert frightful mooses and barren rocks into good lands. One might almost call it a second creation. Every day, this part of Scotland is increasing its production of milk and meat. Oats and barley follow the movement; and wheat dares to show itself in the gloomy, cold county of Caithness, where at

one time myriads of sea-fowl were almost sole occupants.

It is perhaps worth while to mention the case of Mr. Mactier, as an instance of the extent to which, and of the faith with which, capital is sometimes embarked in farming in Great Britain. He is an enterprising Englishman, who, having realized a fortune in the East Indies, purchased a property of 22,000 acres of the Duke of Gordon, in Aberdeenshire, which was almost entirely in a state of nature. The price paid was nearly \$600,000, and he is laying out \$125 the acre, or five times its original cost, in improvements of all sorts. These operations consist, principally, of subsoil plowing. The property being covered with granite rocks, these are blasted and removed. The ground, after being thus cleared, is levelled, drained and limed, and laid out in farms of about 400 acres each. These farms, it is stated, are let for nineteen years, at the rate of five per cent. on the money expended upon them. This is the scale upon which agricultural undertakings are sometimes conducted in Great Britain; for the whole operation, when completed, will absorb between three and four millions of dollars.

The Scotch farmers, with more intelligence than any others of the same class, are careful to undertake only what they can do well. In that country, not only are they not ambitious to become proprietors when they have only capital sufficient to be farmers, but they take care not to rent a hundred acres when they have only capital sufficient to work fifty. They have the sense to live, rather below, than above their income, and do not mind putting their hand to the plow. They prefer in everything, realities. False pride has disappeared before the natural good sense of the Scotch. Some in this country might learn a useful lesson by visiting them.

The Highlands, once the land of Clans and Highlanders and warriors, now of romance and poetical associations in the minds of thousands, who know them only through the pages of Scott, are desolate regions, almost destitute of trees, and with scarcely even heather; everywhere steep and naked rocks, streams of water of all sizes, lakes, falls, foaming torrents, immense mosses, perpetual snows, and rain, and violent winds from the North Sea. It seems as if rural economy could have nothing to do with such a country. The old inhabitants, the clansmen and warriors and their descendants, are gone from the land, forced away by means, which none but a nation, rough-mannered like the British people, could have used; and it is now the land of silence and of sheep. It seems as if there were no human inhabitants in it. If the bagpipe is heard, it is the peaceful amusement of a shepherd, who tends five hundred sheep for wages, and knows not the history of the clans, but whether it has been a good lambing season, and how wool is selling. There are immense forests planted by noblemen, and shooting grounds, and fisheries; but sheep, and desolation, and silence, rocks, crags, waterfalls, and heather, romantic views, and romantic associations with the past—these things, and not agriculture, engage the thoughts of a visitor to the Highlands.

M.

THE WOMEN OF PERU.—Of all the Spanish customs of the olden time, devotion to women is preserved in perfect purity only in Peru. The loving

husband, with his ardent, poetic imagination, delights in being the slave of his lady. The fair senoras make the largest demands on gallantry, and the slightest lack of watchfulness often excites resentment which will not be appeased. In company a gentleman approaches a woman only when he can show her some little attention. Above all, her right is supreme to the first places and the strongest expressions of devotion. People do not say here as elsewhere, "I have the honor to present my compliments to you," or, "How do you do?" but, "Senora, I kiss your feet."

"Proposing," in Peru, is very romantic. The suitor appears on the appointed evening with a gaily-dressed troubador under the balcony of his beloved; the singer steps before her flower-bedecked window, and sings her beauties in the name of the lover. He compares her size to that of a palm-tree, her lips to two blushing rose-buds, and her womanly form to that of the dove. With assumed harshness the lady asks the lover: "Who are you, and what do you want?" He answers with ardent confidence: "Thee do I adore; the stars live in the harmony of love, and why should not we, too, love each other?" Then the proud beauty gives herself away; she takes her flower wreath from her hair and throws it down to her lover, promising to be his own forever.

For the New England Farmer.

THE COLT QUESTION.

MR. EDITOR:—In the June number of the *Farmer* I noticed an article from the pen of H. Poor, Esq., of Brooklyn, N. Y., a gentleman reported to be a good breeder of horses, in which he says he takes "strong grounds" against my treatment of colts.

The importance of the subject in hand leads me to solicit another corner of your valuable paper, to set the gentleman right, as I perceive that I have been entirely misunderstood in my former communication, and consequently his reasonings on the subject are all drawn from false premises.

I do say that I never allow a colt to stand upon a floor before he is two years old, as I believe the practice to be prejudicial to the formation of good feet, and I also agree with the gentleman, that if my plan had been to keep my colts upon a plank floor without cleaning from "December till planting time," I should expect that nine in ten thus trained would either die, or become unsound before they were two years old. The gentleman assumes (tacitly) that there are but two plans of stabling colts. The first is his, of keeping them upon a hard clean floor. The second, is my plan, of keeping them upon a large amount of manure in a heating state. While I maintain, and am prepared to show, that the first of these plans is bad, the second worse, while another, which is in fact my method, is safe and infinitely the best of all, and I also "speak from experience, as many of your readers know," though I must confess that I have never experienced the loss of a horse by allowing him "to stand month after month in his own filth," having been warned against the practice more than 40 years ago. With regard to the keeping of colts upon a clean hard floor I shall only say that the practice is condemned by the best horse breeders in Vermont, and from personal experience and observation in these

matters I entertain no doubt but ring bone, contracted hoofs, sprung knees, as well as many other defects in the feet and limbs of horses, are occasioned in most cases by confinement while young, upon plank floors. Hence during the last fifteen years I have discarded plank floors for young colts entirely, and adopted those constructed by the God of nature, and in that I have never raised an unsound horse.

The best stables I have ever seen for young horses is one built without any artificial floor, further than to make the surface even. I prefer box stalls for each colt, of sufficient size to allow the animal to turn himself, lie down, and rise with freedom. No young colt, in my opinion, should be confined in a stall by a halter. Each stall should be thoroughly cleared at least once every day, and clean bedding furnished every day.

Nothing can be more injurious to the health of a horse of any age, than standing in a close stable, in the midst of the ammonia, naturally generated by their own excrements. Cleanliness is said to be next to Godliness, and the maxim should not be forgotten in the stable treatment of growing animals.

SOLOMON STEELE.

Derby Line, Vt., June 16, 1856.

For the New England Farmer.

BONE MANURE FOR TURNIPS.

MR. EDITOR:—As the season for sowing turnips is at hand, I will give you the result of an experiment, tried a year or two since for the purpose of testing the relative value of bone and compost manures.

I selected a piece of land gently sloping to the south-east. It had lain in grass for at least fifteen years. The upper part of the lot was very light soil, gradually improving as it descended, to a deep rich loam, and running about one rod into a peaty meadow. On the 21st of July, when the ground was quite dry and dusty, I plowed a strip of this containing a little more than eleven square rods. On one half of this, I spread two loads of compost manure, of fair quality; on the other half, about two-thirds of a barrel of crushed bone, prepared in this manner: I made a lye by dissolving five pounds of potash in a half barrel of water, and put the bone into it, leaving it there perhaps a week. I then mixed this bone and lye with a load of dry peat, pulverized by the previous winter's frost; and after it had lain in a heap a few days, worked it over to mix it more thoroughly. The whole mass was quite warm, and the bone was mostly if not entirely dissolved. These manures were spread and well harrowed in after a light rain, that moistened the earth to the depth of two or three inches, and the turnip seed were sown on the 25th of July, with a seed-sower, each half containing eight rows. Dry weather followed, which, though it did not prevent the germination of the seed, of course hindered the rapid growth of the plant. We hoed once, weeding and thinning out at the same time.

When harvested, the crop on the side manured with bone, measured *fourteen* bushels, of fifty pounds each; that on the composted half, *twenty-one* bushels. I confess to some surprise at this result. My expectations leaned strongly the other way.

The cost of the bone was \$2 a barrel in Boston, the potash cost forty cents; so that the expense of manuring that half, was a trifle more than two dollars for about $5\frac{1}{2}$ rods, or nearly at the rate of \$30 per acre. The two loads of compost used, (one-horse loads) would probably be estimated at about the same price, or about a dollar a load.

In conclusion, my experience with various concentrated fertilizers has convinced me that if we would judiciously spend their cost in saving the fertilizers at home, most of us farmers would find our compost heaps largely increased in size and value; in value, much more than the worth of the *shop* manure.

M. P.

Concord, Mass., 1856.

LETTER FROM MR. BROWN.

Washington, D. C., June 25, 1856.

DEAR SIR:—In my last letter I alluded, briefly, to recent improvements in this city. The letter was written on one of the hottest mornings the people ever experience here, and amidst various interruptions. I said nothing of the public buildings, of Congress, or of many other matters of public interest. The additions to the Capitol, now in process of construction, are on a magnificent scale, and are, alone, well worthy a visit to the Federal City. A new room for the Representatives is to be completed in the south wing, and a new Senate Chamber in the north wing. The library is to be extended, and include rooms now occupied by the clerk of the House and his assistants. The old Dome which so long braved the elements, and was visited by hundreds of thousands of persons, of nearly all civilized nations, has been taken down, and a rude wooden roof covers the rotunda to keep the rain from the pictures below. The walls of both wings are up, and this morning the workmen are placing the highly wrought cornices on one corner; all about are derricks of huge construction, and on the top of the work is a steam engine of ten horse power to raise the massive blocks of marble to their respective positions. The most perfect system known for ventilating, warming and supplying water, is to be adopted. Under the second story floors there are long ranges of cast iron boxes about two feet wide by twelve inches in height; these rest upon the tops of the beautiful marble pillars below, and their under sides, ornamented, form the ceiling of the rooms on the first floor, so that the ceiling, instead of mortar, is a series of cast iron plates covered with various devices. Through these boxes we understand that the pure air of heaven is to be urged by a blower, such as is used for forges and furnaces, and to be propelled by a steam engine. In the cold weather the boilers of this engine are to furnish steam for warming by a system of pipes scattered through every part of the building. On the top of this immense pile, may now be seen several huge iron tanks of the common shape of steam boilers, which are intended as water tanks

or reservoirs, to receive the water from the roofs, and thence be conducted wherever it may be wanted for use. To surmount all this the new dome will rise *two hundred feet* above the top of the arch of the rotunda, beginning with rows of wrought pillars at the base, and after rising some twenty or thirty feet, recede, so as to lessen the diameter, then another row of pillars, and so on until nearing the top, when a conical structure with windows for an observatory will afford an unsurpassed view of the surrounding country.

Such are some of the grand outlines. The finer work, that which would attract all persons of taste, may be found in some of the rooms already finished, and in the shops where numerous artists and sculptors are bringing out of the rude blocks of marble the most exquisite forms that can well be conceived. These are to be placed in various parts of the building, on pedestals or niches purposely left for them in the walls.

But the happiest thought of all, carried into the most beautiful and ornate embellishments, may be found in the finish of the single committee room now completed. It is the room, as we were informed, to be occupied by the committee on Agriculture. This room is, perhaps, 20 feet by 18 wide, and to the top of the arched ceiling it may be some 20 feet. It is comfortably and handsomely furnished. The floor is a tessellated pavement, of brilliant colors, and the material is as hard as glass. But it is the walls which strike the beholder with admiration, and, when he has learned the manner in which the gorgeous work before him is executed, with astonishment. On four sides, or planes, of the ceiling overhead, the four seasons are represented by the cornucopia, or horn of plenty, by sheafs of grain, fruits and flowers, and other devices. On one end Cincinnatus is seen as being called from the plow, which he left in the furrow to fight the battles of his country, and with numerous other emblems. All these representations are truthful, and given in most brilliant colors. The pigment used, we are told, is wrought into the mortar itself, so that were a portion of the surface taken off the picture would still remain perfect. Two men, Italians, were employed *three months*, on the ceiling of this single room. We understand that the committee rooms are to be finished in a style emblematical of the business of the committee;—if on Naval affairs, with ships and commercial emblems, if on Public Lands, with prairies, perhaps on fire, or as being fed by herds of buffaloes or, if on Revolutionary Claims, with striking scenes of that eventful epoch, with the old soldier presenting his claim, and the doors of the Treasury thrown open for his relief! Is this the long lost art of the days of Herculeum and Pompeii, now discovered, that shows paintings buried through centuries, but as fresh as though executed yesterday? We are glad

to see this beautiful work going on. It is better thus to appropriate a portion of the public funds than leave them for the scrambling of unscrupulous politicians. We have money, materials and workmen, in abundance, and we trust the National Capitol will not be second, by-and-by, to any structure in the world, in true architectural taste, richness and convenience.

The Treasury department is being extended, and the coarse sandstone of which the original building was constructed, has been painted with some soft color, so that the eye rests pleasantly on it. The Patent Office, of white marble, is also receiving great additions, and is destined to become a magnificent structure.

Many New England people are here looking in upon Congress, at the public buildings, or catching the excitement of the day. But I must close. The heat is intolerable, and my letter will be, if I spin it longer. Truly yours,

SIMON BROWN.

Joel Nourse, Esq., Boston.

DOINGS AT THE PATENT OFFICE.

In a recent letter from the Washington correspondent of the *Boston Journal*, are some interesting statements of operations at the Patent Office, a portion of which may be found below. It affords us pleasure to find attention given to agricultural matters by such influential papers as the *Journal*, and its intelligent correspondent. We more than half suspect that the proprietor of "Indian Hill Farm" speaks through the *Journal*, and that he finds more pleasure in rural affairs than in the political turmoil at Washington. But to the extract. He says:

"Recently your correspondent paid a visit to the Patent Office, the never-failing subject for amateur letter-writers. Few of them, however, discover the 'Agricultural Bureau,' which is gradually attaining an importance worthy of the interest which it was instituted to aid. An appropriation of \$30,000 has already been made by the present Congress, and a further appropriation of \$70,000 will be asked for in a few weeks—making \$100,000 for the present year, besides cost of printing, binding, packing and transporting 210,000 copies of the annual report. A sketch of the present operations of the Bureau may not be uninteresting.

About twenty thousand dollars are to be expended for seeds and cuttings, some of which are already purchased. Take, for instance, turnips; last year twenty varieties of English turnip seed were distributed for experiment; from these, eleven varieties were approved, and forty bushels have arrived in New York; they will reach here in a week, and be immediately distributed. At the same time the Bureau will receive four hundred bushels of peas, and seven hundred pounds early York cabbage seed.

One thousand bushels of wheat have been ordered from the Mediterranean, with approved varieties of barley and rye. This wheat will be distributed with special reference to experiments in

'cross fecundation,' by which it is thought new and valuable varieties of wheat can be established.

Dr. Parker, U. S. Commissioner to China, is to make an excursion this summer to the northern portion of the 'flowery kingdom,' and has one thousand dollars placed at his disposal for the purchase of seeds there.

Hay is our most valuable crop, yet some of our imported grasses have become much deteriorated, and the real value of many native varieties is unknown. Mr. W. T. Dennis has been commissioned to visit every State, report on its grasses, both native and foreign, and procure seed for distribution. When seed has been procured, experiments will be instituted with a view of ascertaining what grasses are most lasting, most prolific, and most nutritious for stock, in each county of the Union. This is a gigantic task, but one which promises important results.

Townsend Glover, whose models of fruit are well known in Boston, has been sent to Iowa, to examine the insects injurious to the wheat crop. It is expected that Congress will make an appropriation, enabling him to perfect his collection of artificial fruit, vegetables, &c.

Dr. C. T. Jackson, of Boston, is permanently engaged in chemical experiments of agricultural value. One of these has proved that oil worth seventy-five cents per gallon can be extracted from cotton seed, (hitherto worthless) leaving a cake worth three cents per pound. Another analysis shows that the cob of Indian corn only contains three and a half per cent. of nutritive matter. Experiments are to be carried on, determining the comparative amount of nutriment in cereals—the amount of tannin in barks and other materials—the amount of phosphoric acid in the worn-out soils of the Atlantic as compared with the virgin soils of the West, &c., &c.

The above paragraphs will give the readers of the *Journal* an idea of the value of the 'Agricultural Bureau' to the yeomanry of our land. The director, D. Jay Browne, Esq., is a native of Exeter, N. H., and admirably qualified for his task."

NATIONAL CHARACTERISTICS.

It has been said that men will betray the characteristics of their nation in their conversation. It chanced that this point was under discussion by a group of passengers and the captain of one of our clipper ships, during a recent passage across the Atlantic. It was a fine day, and most of the passengers, both cabin and steerage, were upon deck. The group above mentioned had been commenting upon the bluntness of the English, cautious shrewdness of the Scotch, and the ready wit of the Irish, when the captain, taking the segar from his lips, pointed towards the forward part of the ship, where, at different points, he indicated a native of each of the three nations. He then proposed to wager that he would ask each of them the same question separately, and that the answer of each would be an illustration of his national characteristic. This proposition being acceded to, it was decided that the question should be, "What will you take to climb to the masthead?" and the party moved forward to put the experiment to the test.

The first one accosted was the Englishman, who

was slowly pacing the deck. "John," said the captain, "what will you take to climb to the mast-head?" John glanced upwards an instant, and then exclaimed with characteristic bluntness, "I'll take five pound." A smile from the group proclaimed the success of this trial.

The Scotchman was next approached; he was a sandy-complexioned, sharp-eyed fellow, and was seated upon a sea-cheat, darning a rent in an old pair of pantaloons. "Sawney," said the captain, jingling the silver in his pocket as he approached him, "What will you take to climb to the mast-head?" Sawney's ears pricked up at the sound of the coin, and as he slowly and cautiously measured the height with his eye, without rising from his seat, he replied, with the shrewdness of a true Scotchman, "I dinna ken, mon; what'll ye gie?"

The last one approached was the Irishman, who was carelessly leaning over the bulwarks, humming one of the lively melodies of his country; his old battered *caubeen* was cocked jauntily over his right eye, while his left was employed in executing a series of expressive winks at a group of the female steerage passengers who were upon the other side of the deck—"Pat, my boy, what will you take to climb to the mast-head?" asked the captain. Pat's blue eye twinkled as he turned it upward, and a look of irresistible comicality played upon his phiz, as he replied, "*Shure I think I'd take a bad could, intirely.*"—*Traveller.*

For the New England Farmer.

IN REGARD TO CAPT. SYMMES' HOLE.

MR. EDITOR:—In reply partly to Mr. I. Stearns' questions relative to the time the venturesome captain lectured upon the "theory of this earth's being hollow," "whether his lectures were ever published," &c., &c., I will give him what information I possess upon said matter, premising he will find the same correct, as I glean it from a *bona fide* publication of the year 1818, which appears from the work in question, to be the period at which Capt. S. flourished.

Whether his "lectures" were ever published or not, is more than I have the means of telling; if they were, they were probably the earliest edition of "curtain lectures," and had but a slight circulation among the literati in this quarter of the country.

The following is a copy of a document issued by him at the time:

"CIRCULAR.

Light gives light, to light discover—*ad infinitum.*

St. LOUIS, MISSOURI TERRITORY, NORTH AMERICA, }
APRIL 20, A. D. 1818.

TO ALL THE WORLD.

I declare the earth is hollow and habitable within; containing a number of solid concentric spheres, one within the other, and that it is open at the poles twelve or sixteen degrees. I pledge my life in support of this truth, and am ready to explore the hollow, if the world will support and aid me in the undertaking.

JOHN CLEVE SYMMES, of Ohio.

N. B. I have ready for the press a 'Treatise on the Principle of Matter,' wherein I show proofs of the above positions, account for various phenomena, and disclose Dr. Darwin's golden secret. My

terms are, the patronage of this and the new world. I dedicate to my wife and her ten children. I select Dr. S. L. Mitchell, Sir. H. Davy, and Baron Alexander de Humboldt as my protectors. I ask one hundred brave companions, well equipped, to start for Siberia, in the fall season, with reindeer and sleighs, on the ice of the frozen sea. I engage we find warm and rich land, stocked with thrifty vegetables and animals, if not man, on reaching one degree northward of latitude 82°. We will return in the succeeding spring.

J. C. S.

To His Excellency Gov. Wm. Clarke."

Without further personal information in regard to the movements of the captain, and not wishing to treat a really serious matter in any other way than with the importance the subject demands, I will merely add, that years ago, when a wanderer on the "deep, deep sea," in the solemn lonesomeness of a ship's fore-castle, Capt. Symmes' name used often to be mentioned, in connection with the blowing of the North West winds, at times particularly when their prevalence made "going aloft" anything but an amusement.

It was the common and believed report then, among seamen, that Capt. Symmes had been to the North Pole, and discovered a hole, which up to the time I speak of had been familiarly known as "Symmes' Hole;" one of Capt. S.'s crew on their return reported that the aperture discovered was the one whence issued the North West winds, and that the discovery was an accidental one of the captain's, he having one day shinned up to it divested of his coat and jacket; and had either of those articles been within his reach, he would have closed the hole, (it being very small.)

Could he have only succeeded in so doing, I am sure he would have had the prayer of many a seaman as well as landman, and no more fervent one than would have been offered by.

J. P. T. SHIVER.

Winchendon, Mass., June 21, 1856.

For the New England Farmer.

PROTECT THE BIRDS.

Very few persons indeed appreciate the field birds as highly as they ought. By far too many look upon the feathered tribe as mere tenants of the air, having no specific duties to perform; or as creatures enjoying an existence merely, without being of any possible profit or pleasure to man.

Such a mean appreciation of their inestimable worth, is perfectly absurd, not to say preposterous. Can a man's heart be so hard and adamant like, as not to be touched and awakened to a livelier unison even, by the sweet music discoursed by the feathered songsters, from hill-top and glen?

Surely, their music is sweeter than that of the harp, and contains a vivacity which no human breath or hand can impart.

But birds were not given us for pleasure only; they were intended to aid and assist us likewise.—And this they do most effectually, by destroying innumerable insects which would be injurious and destructive to vegetable growth.

Such birds as the robin, the blue bird, the linnet, and the wren, are both pleasurable and profitable. But let us now come to the most remarkable and peculiar of all birds—the king bird. All, I hope,

are familiar with his form, his beauty, his habits, and his unsurpassed usefulness.

Who is not acquainted with the compactness of his form, with the masculine contour of his head, and lastly, with the peculiar formations of his beak, and also with the efficient and cunning manner in which he uses his sharp, and even deadly weapon?

How many a heart has rejoiced in Spring time, to see this little monarch of birds rearing his nest among the thick branches of some favorite old apple tree, near the farm house or barn.

How well-assured have the inmates felt, that, if the king bird took up his habitation near the farm buildings, no marauding hawk would dare to molest the sanctity of the hen-coop.

How well satisfied were they that no plundering crow would dare venture among the thick boughs of the stately elm overhanging the dwelling, to rob the red-breast robin's nest of all that was so dear and hallowed to the mother bird.

Truly, the king bird is no negligent or careless watchman, neither is he a cowardly assailant. He stands ever upon his guard, and when duty requires, he is vigilant and brave to attack. Indeed, I never realized the actual worth of the king bird until the present season. My corn field is situated about one hundred rods from the house, and greatly exposed to the ravages of the crows.

This field is large, and in it stand a few veteran apple trees—the remainder of a once valuable orchard. To my great joy, I noticed early in spring time, that two pairs of king birds had selected places for building their nests among the boughs of these trees.

From what I previously knew of the king bird, I was at once constrained to believe that the bird would be of great value to me in keeping off the crows.

My expectations have been realized, for, during the week past, I have noticed several times that an old crow attempted to enter the field, but was promptly met at the outer limit, and immediately repulsed by my faithful guard.

My cornfield has remained unmolested by the crows, although in a very exposed position, and I attribute its preservation to the vigilance of the king bird.

A thousand times have I thanked the bird for his watchfulness, and as often blessed the maker of all things for so glorious a gift.

Farmers, see to it that the birds are preserved, and they will a thousand times pay you for your care concerning them.

J. T. J.

Leominster, Mass., 1856.

ROSE CUTTINGS.—When is a good time to root rose cuttings, and how, and in what soil?—G. SHERMA, *Huron Co., O.*

In the summer, choose a shady place—the north side of a wall or building is best, and prepare a soil from four to six inches deep, nearly all sand; pit sand will do. A frame and glass is desirable, although they will root in the open soil if kept moist and shaded from the sun. In selecting the cuttings, choose the short-jointed wood, usually that from which the flowers have recently fallen, taking a portion of the heel, or attachment to the larger shoot, with it. These being in what is called a half ripe state, remain green sufficiently long to en-

able the base to callous over, after which the roots are quickly produced; it may be known by its commencing to grow. The cutting is then a perfect plant, and ready for potting off. For a few cuttings, flower pots may be used, with bell or hand glasses to cover them. Those kinds which flower more or less all the summer, as China and Bourbons, strike very readily in the spring or fall, or indeed at any season; the hybrid perpetuals best perhaps after the midsummer flowering, while the last named are more usually propagated, as are also all kinds of June or summer roses, by layers in the spring, from the greater difficulty in the rooting them from cuttings. The cuttings should be inserted about half their depth in the soil.—*Country Gentleman.*

For the New England Farmer.

KEEPING DOGS.

MR. EDITOR:—As your paper is in part devoted to the subject of raising and keeping stock, and as there is one kind of stock which can be easily shown to be not only unprofitable, but absolutely detrimental to the interests of our country, perhaps a few words on that subject might be acceptable.

A race of animals called dogs, considered by some indispensable, and yet in reality, such a nuisance, I would look at in the light of economy.

Now it is readily admitted that in some kinds of business a dog may be useful and even necessary, but I venture to say that in three cases out of four, they are infinitely worse than useless.

The farmer says a good dog is useful on the farm to protect his crops against the depredations of his neighbors' cattle, and to protect the lambs and poultry from the foxes and other wild animals, and his clover from the wood-chucks. I think no man deserves the appellation of "farmer," who needs a dog to protect his crops, and if we turn our sheep with young lambs into back pastures on our wild mountain farms, it is very few lambs that will be saved by the dog, and if, like some of our more prudent farmers, we keep them in a small lot near the barn, there is certainly no need of such a sentinel. The wood-chucks have done me some damage, but not one-fourth part as much as my neighbors' dogs and boys in tramping down my crops, and tearing down my stone walls.

The mechanic, the doctor, the lawyer and many others have no pretext whatever, only that "a good dog is a good thing, and it costs nothing to keep him," and "I like a good dog, and so I keep him." Well, now, how is it about the cost of keeping him? I notice when I go into a neighbor's house at the close of a meal that the good man or lady fills up a large plate with rich food for the dog, sufficient in quantity, if fed to the pig or the poultry, to amount, at least to \$5 a year; I think \$10 a year would be nearer the truth. Take the neighborhood where I live for a sample. We have one dog to every ten persons, or 272,811 in the New England States. What an army of dogs!

Supposing one in four to be really useful (which is the most I can possibly admit) and we have 204,608 useless dogs to support at a cost, according to the lowest estimation, of \$1,032,040. So much for the economy,—and now a few words for the convenience.

I have no disposition to abuse any dumb animal,

and if I kept a dog, I should, like most others, suffer him to lie on the kitchen floor by the stove; but if my wife, in doing her work, was obliged every five minutes to step over or go round and kick out of the way a great lazy dog, I should expect her smiles would be few and far between, to say nothing of the disgust one feels when knocking at a neighbor's door to have the inmates obliged to wage a war of extermination with the dog before they can let us in and then ten to one but the first salutation will be from the gentleman with four legs.

H. BRIGGS.

Fairhaven, Vt.

EXTRACTS AND REPLIES.

PLASTER, OR GYPSUM.

There is much said of the value of plaster. As I have a variety of land, I thought plaster might suit some of it. I can buy it at my door at 70 cents per hundred. You would much oblige a subscriber by informing me of the use of it, i. e. kind of land, how applied to a hoed crop, at the time of planting or weeding, and quantity per acre, on run-out grass land, and season of year?

West Windsor, Vt., June, 1856.

T. S. F.

REMARKS.—In a case like yours where you possess a variety of soil and have no particular knowledge of the action of plaster, we think the true course is to make an experiment on each kind of soil by applying the same amount of plaster to one or more square rods of ground, and carefully noting the result.

On soils that already contain a sufficient quantity of the sulphate of lime, little or no effect will be observed; while in those that are deficient in this element, but abounding in others necessary to the plant, the application of plaster will produce the happiest results.

Light, dry, sandy, or open soils, as they are sometimes called, are those upon which plaster generally operates the best—because the rain water readily dissolves and conveys it to the roots of plants.

WIRE FENCE AND PLANTS.

MR. EDITOR:—Is the *wire fence*, as manufactured and varnished by J. E. Butts, Jr. & Co., injurious to the vine or fruit, when used as a trellis for the grape? If injurious, would the difficulty be obviated by applying a coating of white paint, or is it the material that injures?

W. P.

REMARKS.—We have heard no complaint before, and do not think any varnish used would be injurious to plants in the open air.

PLUM TREE—20 FEET GROWTH IN A SEASON.

You ask if "I. T. W. does not mean twenty inches instead of twenty feet that grew in one year." I am not in the habit of telling "*large stories*," nor would I have the name of "*stretching the truth*" for all the plums in New England; and when I stated that a single plum scion grew in one year only some four or five inches less than twenty feet, I meant just what I said—or in other words, not to

be too precise, I mean over *nineteen feet* and *six inches*. I stated the simple fact—if it seems incredible it is open for inspection. There were three shoots from the scion, one over seven feet, and one over six feet, and the other about five feet, with two or three side shoots from these, all from a single scion. Will that answer? L. T. W.

Marlboro', N. H., June, 1856.

THE CANKER WORM.

FREDERIC HOWE, *Danvers, Ms.*—Tarring the trunk of a tree is the remedy generally resorted to, in order to prevent the female, who cannot fly, from ascending the tree. We know nothing of the experiment to which you refer of digging the ground several times in the season, and especially just before it freezes. The worm descends into the ground

from two to six inches, according to the nature of the soil.

MR. GREGORY, of Marblehead, in our volume for 1855, page 549, details a plan which has been successful, and to which you are referred.

MAGGOTS ON BEET LEAVES—LICE ON TREES.

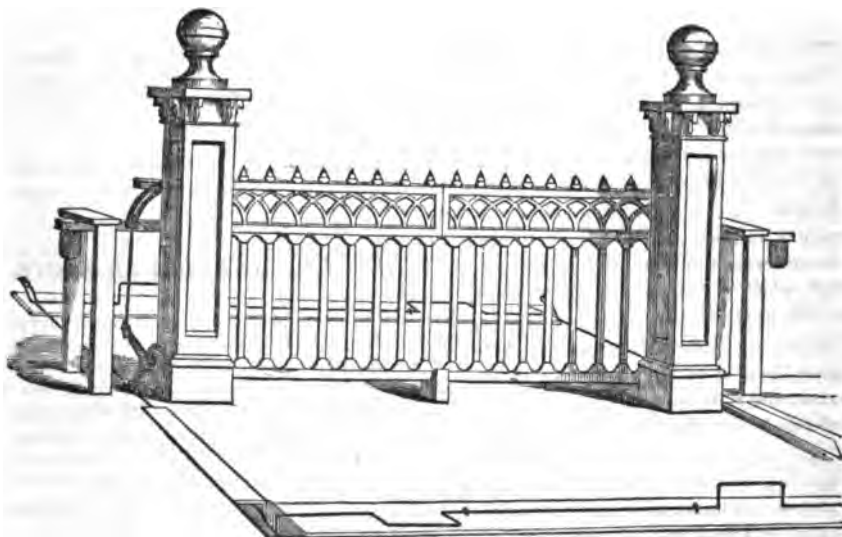
Can you, or your correspondents, inform me how to preserve beet leaves from the ravages of the maggot? When it first came upon our beet leaves, we thought it was a blight, but upon close examination we found it to be a maggot in the leaf between the two skins.

Do you know of any thing that will kill lice upon apple trees without injuring the tree? By answering the above in the Monthly *N. E. Farmer*, you will much oblige a

SUBSCRIBER.

Dartmouth, Mass., June 19th, 1856.

WOODRUFF'S NEW SELF-ACTING GATE.

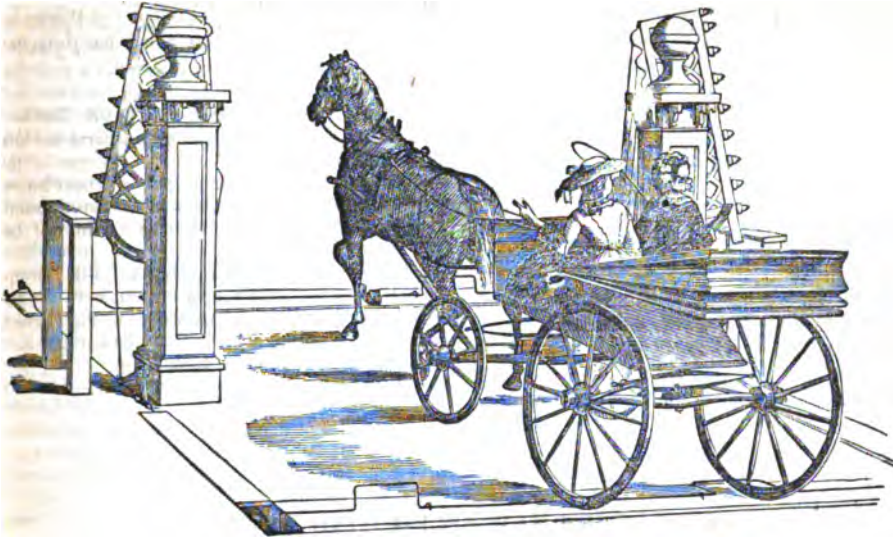


THE GATE AS IT APPEARS, CLOSED.

These illustrations of a gate are not presented as particularly designed for ordinary farm use, but for front gates, and other important places. A gate of this kind opening upon a highway where neighbors persist in turning their cattle at large, must be exceedingly convenient. With the common gate one must either have a person go to it and open and close it, or get out of the carriage, hitch the horse, if he be a restive one, then drive him through, hitch him again, and close the gate before he can go on. This sort of tax we have been subjected to for some years, and can, therefore, appreciate the value of a self-opening and closing gate.

Mr. Woodruff sometime since obtained a patent

for an improvement in farm and ornamental gates, and a full-sized working gate was on exhibition at the late fair of the American Institute, at the Crystal Palace, New York. Those who witnessed the operation of that gate, expressed themselves highly pleased with it, but experience has demonstrated that self-acting swing gates are objectionable, from their liability to damage by heavy gusts of wind and gales. To remedy this and other defects, Mr. W. has invented the gate represented in the annexed engravings, and has made an application for a patent, through FOWLER & WELLS' Patent Agency, of 308 Broadway, New York city. This gate does not swing horizontally, but is composed



THE GATE AS IT APPEARS, OPENED.

of two separate parts, one being attached to each post by two hinges operating vertically.

The gate is so jointed as to close up something after the manner of a lady's fan, yet in a very firm and substantial manner. As each half of the gate is but four or five feet long, it can easily be made strong and durable. This gate is balanced upon its hinges by counter weights beyond the posts, and is operated by the wheels of the carriage or runners of a sleigh, which moves the rod over which it passes. This rod operates the side bars or chains, which are attached to the cranks outside the posts, and which move the gate as desired, opening it on approach, and closing it on leaving.

We are informed that the inventor is prepared to deliver the gate represented in the engravings, boxed for shipment, with directions for putting it up, so plain that any ordinary mechanic can understand them—without the main posts, which can be constructed to suit the taste of the applicant—for \$35, which is less than it could be manufactured for without the labor saving appliances possessed by him.

Any orders may be addressed to FOWLER & Wells, or to the inventor, at Elizabeth City, N. J.

FRENCH SURGERY.—The following anecdote, told of Sir Astley Cooper, is a fine illustration of the difference between the French and English mind; the one content with outward display, the other only with substantial fruit.

On visiting the French capital, he was asked by the surgeon *en chef* of the empire how many times he had performed a certain wonderful feat of surgery. He replied that he had performed the operation thirteen times. "Ah, but Monsieur, I have

done him one hundred and sixty times. How many times did you save his life?" continued the curious Frenchman, after he looked into the blank amazement of Sir Astley's face. "I," said the Englishman, "saved eleven out of the thirteen. How many did you save out of one hundred and sixty?" "Ah, Monsieur, I lose dem all, but de operation was very *brillante*!"

PRESERVING SHINGLES ON ROOFS.

Some paint roof shingles after they are laid. This makes them rot sooner than they otherwise would. Some paint the courses as they are laid; this is a great preservative, if each shingle is painted the length of three courses. But about as sure a way to preserve shingles, and that with little or no expense, is a mode recommended in a letter to us by Hon. David Hunter, of Clinton, on the 23d of Feb. last. We republish so much of his letter as relates to this subject, in hopes that it may be of service to many of our readers.

"There is one thing more, that nearly all people know, if they would only attend to it; that is, to sprinkle slaked lime on the roofs of their buildings, in rainy days. Put it on considerably thick, so as to make the roof look white, and you never will be troubled with moss, and if the shingles are covered ever so thick with moss, by putting the lime on twice, it will take it all off and leave it white and clean, and will look almost as well as if it had been painted. It ought to be done once a year, and, in my opinion, the shingles will last almost twice as long as they will to let the roof all grow over to moss. I tried it on the back side of my house ten years ago, when the shingles were all covered over with moss, and they appeared to be nearly rotten. I gave the roof a heavy coat of lime, and have followed it nearly every year since, and the roof is better now than it was then, and to all appearance, if I follow my hand, it will last ten or fifteen years longer. The shingles have been on the roof over

thirty years. There is no more risk about sparks catching on the roof than on a newly shingled roof. Those who do not have lime near by, can use good strong wood ashes, and these will answer a very good purpose to the same end."

The action of the lime is to cleanse the surface of all impediments to the free and rapid passage of the rain-water off. This enables the shingles to dry, very soon, and consequently prevents rotting. Moss-covered roofs will rot very rapidly.—*Rural Intelligencer*.

WHAT A POOR FARMER CANNOT AFFORD.

The following remarks are from an Address by HORACE GREELEY, at the annual fair in Erie County, N. Y., last autumn. Mr. Greeley had a pretty thorough agricultural training while a boy, so that nearly all the processes of the art are familiar to him. To this he has added a close and discriminating observation, and thus qualified himself to write as good an agricultural address as we read from any source.

"The truth I am most anxious to impress, is that no poor man can afford to be a poor farmer. When I have recommended agricultural improvements, I have often been told, 'this expensive farming will do well enough for rich people, but we who are in moderate circumstances can't afford it.' Now, it is not ornamental farming that I recommend, but profitable farming. It is true that the amount of a man's capital must fix the limit of his business, in agriculture as in everything else. But however poor you may be, you can afford to cultivate land well if you can afford to cultivate it at all. It may be out of your power to keep a large farm under a high state of cultivation, but then you should sell a part of it, and cultivate a small one. If you are a poor man, you cannot afford to raise small crops; you cannot afford to accept half a crop from land capable of yielding a whole one. If you are a poor man you cannot afford to fence two acres to secure the crop that ought to grow on one; you cannot afford to pay or lose the interest on the cost of a hundred acres of land to get the crops that will grow on fifty. No man can afford to raise twenty bushels of corn to an acre, not even if the land were given him, for twenty bushels to the acre will not pay the cost of the miserable cultivation that produces it.

"No poor man can afford to cultivate his land in such a manner as will cause it to deteriorate in value. Good farming improves the value of land, and the farmer who manages his farm so as to get the largest crop it is capable of yielding, increases its value every year.

"No farmer can afford to produce weeds. They grow, to be sure, without cultivation; they spring up spontaneously on all land, and especially rich land, but though they cost no toil, a farmer cannot afford to raise them. The same elements that feed them, would, with proper cultivation, nourish a crop, and no farmer can afford to expend on weeds, the natural wealth which was bestowed by Providence to fill his granaries. I am accustomed, my friends, to estimate the Christianity of the localities through which I pass, by the absence of weeds on and about the farms. When I see a farm covered by a gigantic growth of weeds, I take it for granted that the

owner is a heathen, a heretic, or an infidel—a Christian he cannot be, or he would not allow the heritage which God gave him to dress and keep, to be deformed and profaned. And if you will allow me to make an application of the doctrine I preach, I must be permitted to say that there is a great field for missionary effort on the farms between here (East Hamburg) and Buffalo. Nature has been bountiful to you, but there is great need of better cultivation.

"Farmers cannot afford to grow a crop on a soil that does not contain the natural elements that enter into its composition. When you burn a vegetable, a large part of the bulk passes away during the process of combustion into air. But there is always a residue of mineral matter, consisting of lime, potash, and other ingredients that entered into its composition. Now, the plant drew these materials out of the earth, and if you attempt to grow that plant in soil that is deficient in these ingredients, you are driving an unsuccessful business. Nature does not make vegetables out of nothing, and you cannot expect to take crop after crop off from a field that does not contain the elements of which it is formed. If you wish to maintain the fertility of your farms, you must constantly restore to them the materials which are withdrawn in cropping. No farmer can afford to sell his ashes. You annually export from Western New York a large amount of potash. Depend upon it there is nobody in the world to whom this is worth so much as to yourselves. You can't afford to sell it, but a farmer can well afford to buy ashes at a higher price than is paid by anybody that does not wish to use them as fertilizers of the soil. Situated as the farmers of this county are in the neighborhood of a city that burns large quantities of wood for fuel, you should make it a part of your system of farming to secure all the ashes it produces. When your teams go to town with loads of wood, it would cost comparatively little to bring back loads of ashes and other fertilizers that would improve the productiveness of your farms.

"No poor farmer can afford to keep fruit trees that do not bear good fruit. Good fruit is always valuable, and should be raised by the farmer, not only for market, but for large consumption in his own family. As more enlightened views of diet prevail, fruit is destined to supplant the expensive quantities of animal feed that are consumed in this country. This change will produce better health, greater vigor of body, activity of mind, and elasticity of spirits, and I cannot doubt that the time will come when farmers, instead of putting down the large quantities of meat they do at present, will give their attention in autumn to the preservation of large quantities of excellent fruit, for consumption as a regular article of diet, the early part of the following summer. Fruit will not then appear on the table as it does now, only as dessert after dinner, but will come with every meal, and be reckoned a substantial aliment.

"No poor farmer can afford to work with poor implements, with implements that either do not do the work well, or that require an unnecessary expenditure of power. To illustrate this, it will be necessary to ask your attention to the nature and office of the mechanical operation requisite for the production of good crops. It is essential to the thrifty growth of a plant that the air should have free access to every part of it, the roots as well as

the leaves, and that the soil in which it grows should be moist, but not too moist, and should have a certain degree of warmth. These necessities of vegetation will enable us to understand the mechanical operations on the soil demanded by good farming.

"The soil should be light and be finely pulverized, in order that the little fibres sent out by the roots in search of nourishment may be easily permeated in all directions. It should be porous to be easily penetrated by air and water, and as its own weight and the filtering of rains tend constantly to bed it down into a compact mass, it needs frequent stirring."

THE CLOVER.

The surface of the earth at this time is almost everywhere covered with that rich, beautiful and fragrant plant, clover, of one kind or another. It covers broad fields, waiting for the scythe, and meanwhile scattering its fragrance over towns and villages; it springs in wide pastures, dots the hills where sheep roam, checkers the valleys where cattle graze and perfumes them with its sweet breath. From it bees are busy laying up stores of honey which may yet come to our tables. The dusty way-side and the crevices in the dry rock are redolent of the clover blossoms, and the bleak bank and deep excavation of the railroad track are cheered with its beauty and fragrance too. It is not a new setting of gems in the sweet grass, but a multiplication of them, with fresh brilliants added. It comes to us daily, not only on our senses, but to our physical nature, in the golden butter, tender sirloins or lamb; in the cream for our fruit and ices, and grateful milk during the fervid heat!

"The clover is every where," people say, "and how came it there?" Fields at hand are now so thickly covered with it that it can no longer stand. But those fields were not seeded by man. Last year some of them were sowed with oats that are now dense with clover alone; and so it is with pastures, and even some low grounds where clover has rarely, if ever, been seen before. It is every where. Grows in the garden and corn field. Here, holds up its modest head in the hot highway, and there, looks clean and prim by the spring, or laves its blossoms in the cool brook as the limpid waters pass along.

Well, welcome, welcome, to the clover, for it sheds innumerable blessings on us, for, with the other grasses it forms the basis of agriculture. No wonder the Flemings said, that "without clover, no man in Flanders would pretend to call himself a farmer." The introduction of clovers, and the cultivated grasses, is one of the greatest improvements in modern husbandry. The commencement of improvements in the different species of live stock, in the mode of cultivation, and in the superior quality, as well as quantity, of the crops of grain, may be dated from the period when the sowing of clovers and grass seeds was generally introduced.

But where have the clovers come from now, appearing so suddenly and so universal in extent? We cannot tell—can you?—but our theory is, that their present appearance in such quantity, making the earth rich and lovely, is the effect of the drouths of 1854 and '55. During those seasons, not only the surface of the earth became as dry as a puff ball, but in digging some eight or ten feet, scarcely a handful of moist earth could be found. It was then that the secret stores of the earth were called on to supply the enormous evaporation from the surface. The moisture from below came up, bringing with it the minerals in its way, and among them something—perhaps the sulphate of lime—having an affinity for clover seeds and put them into an active condition; they germinated and grew and covered the earth with their foliage, fragrance and flowers.

If this theory be a plausible one—or if it is not—drouths have their office to perform as well as winds and showers and storms. Indeed, we have no doubt of the fact; and though they wasted our fields, and the water-courses were dry, and cattle went weary and thirsty to their parched valleys, and returned to their heated stalls hollow and thin, yet they were carrying on the operations of that wise and Omnipotent Power who always knows what is best.

It is our theory that the same causes—that is, the introduction of mineral substances from below—that ruined so many wells after those drouths, and that contaminated the Cochituate water, whereby tens of thousands were deprived of the pure beverage, bring this abundance of clover, and may feed innumerable other plants for years to come, for the benefit of both man and beast.

We cannot now pursue the suggestions that crowd upon us, but some of our learned and observing correspondents, may do the agricultural world, at least, a favor, by giving the subject some investigation.

SQUIRREL NAVIGATION.

The instinctive ingenuity of animals almost equals the deductions of the human reason. We have read of an ingenious device of a company of monkeys to cross a narrow stream, by uniting their tails firmly together, and swinging across from a high tree on one bank, to a tree on the opposite bank, but we have never before heard of squirrel sagacity in fording a wide stream. We take the incident from the *Presbyterian*:

"What I am going to relate appears so extraordinary, that were it not attested by numbers of the most creditable historians, among whom are Klein and Linnæus, it might be rejected with that scorn with which we treat imposture or credulity; however, nothing can be more true than that when these animals, in their progress, meet with broad rivers and extensive lakes, which abound in Lapland, they take a very extraordinary method of crossing them. Upon approaching the banks, and

perceiving the breadth of the water, they return, as if by common consent, into the neighboring forest, each in quest of a piece of bark, which answers all the purposes of boats for wafting them over. When the whole company are fitted in this manner, they boldly commit their little fleet to the waves, every squirrel sitting on its own piece of bark, and fanning the air with its tail, to drive the vessel to its desired port. In this orderly manner they set forward, and often cross lakes several miles broad.—But it too often happens that the poor mariners are not aware of the dangers of their navigation; for although at the edge of the water it is generally calm, in the midst it is generally turbulent. There the slightest additional gust of wind oversets the little sailor and his vessel together. The whole navy that but a few minutes before rode proudly and securely along is now overturned, and a shipwreck of two or three thousand sail ensues.—*Goldsmith.*

Goldsmith is not regarded as very good authority in matters of Natural History. His *Animated Nature* has more than one pleasant fable. As to the squirrel story, although rather marvellous, we can say that it has had its counterpart in this country. Many years ago, when on the banks of the Ohio, we were told that on a certain occasion a woodman, who had split and piled on the shore some thousand shingles, found that during the night the pile had disappeared, and the shingles were scattered on the opposite shore. On inquiry, he discovered that a troop of emigrating squirrels had borrowed his property to ferry themselves across the river. So said an eye witness. We do not vouch for the fact.—*Eds. Pres.*

REMEDY FOR THE BORER.

MR. TUCKER:—With your approval, the following prescription is most respectfully and with great pleasure dedicated, through your valuable paper, to the New York State Agricultural Society.

Sure and total destruction to the Apple, Quince and Peach Borer; and at the same time a decided stimulant and safe fertilizer to the tree.

Make a concave mound of mellow earth around the tree, rising about six inches above the work of the insects. Thoroughly saturate this mound with a strong common salt brine, twice, at an interval of four weeks, at any time of the year when the ground is not frozen; stale beef or pork brine, in its full strength, is just the thing. The mound of earth holds the liquid in suspension, round the tree, until by capillary attraction it is carried into the holes and burrows of the insect—where the salt is sure destruction to every grade of this ravaging and pestilent enemy. Vary the quantity of the dose with the size of the tree. Be cautious with small trees. Old, large trees, three feet round, may have a painful at a time.

I have revived trees by this application from apparent death. Apple trees, 30 years old, with their trunks perforated very badly, are now perfectly healthy, and their wounds are healing over. Two Golden Sweetings, 8 years old, last June withered and showed signs of death. On examination I found the trunks full of borers, and more than half the surface eaten off. I made the application twice. Both trees revived, and made new wood the same season. This spring, I have treated every other tree with the application. These trees are in bloom

and the wounds made by the insect are rapidly healing over. I would not now, without trial, recommend the application to any other than the apple, quince and peach.

N. S. SMITH.

Buffalo, N. Y.—Country Gentleman.

For the New England Farmer.

POPULAR ERRORS.

MR. EDITOR:—In this age of improvement and innovation, when we behold the utmost rivalry displayed in the scientific and literary world, new inventions of every kind being brought into existence every where around us, new plans for the alleviation of human misery continually developed, academies and colleges founded on new and improved principles, arising in every city and large village, for the purpose of furnishing the means of instruction to the children and youth of our populous places,—what systematic, thorough, well developed efforts are being made to improve and amplify the education of the laboring classes? The question has often been discussed at great length, what kind of an education is most suitable for farmers, and has never been decided. The term education in its abstract and unlimited sense, implies an understanding of every branch of learning taught, but in its common use means a proper instruction in all the branches of learning and business which one is called upon to perform. It is an old and time-honored error that farmers need but little learning, and hence the expression which we often hear used by even respectable farmers, "I have several sons; one I intend for a profession, he must go to college; another I intend shall learn a trade, I shall send him a year or two to the academy; but the other is going to be a farmer; the privilege of the district school will be enough for him, he will never have much use for learning." My dear friend, you are making one of the greatest mistakes possible. That son, whom you are intending shall become a farmer, is entering upon a profession requiring for its successful accomplishment the best of learning, talent and judgment. It should be your first care to give a thorough and perfect understanding of mathematical science, and its various applications. In fact, the education of a farmer must be of the most comprehensive and thorough nature.

But perhaps we hear an old and respectable farmer say, "For my part, I cannot see the use of so much learning. I have lived to the age of sixty years or more, without any more education than what I obtained at the old district school-house, and I feel as contented as though I had been through college." Very well, my friend, but where are those healthy, active boys that I saw a few years ago, playing about your door? "Why, my boys did not seem to like farming enough to choose it for their business. One said it was not profitable enough, another that it was too hard and dirty, another that there was not opportunity for reading and study. Therefore, one has gone to California, the other, next older, is learning a trade, and I could keep the youngest only by sending him to an academy for two or three years. And since he has come home from school, he has so many new-fangled notions that I scarcely know what to do with him." Thus we see how it is, although we will admit, that many farmers live to a good old age, and die hap-

py; yet it is a hard matter to convince the rising generation that agriculture is honorable, when it is represented only by men of but meagre literary and scientific attainments, and possessing a rough and unrefined exterior. For it is an undeniable fact, that a business is respected according to the character of the individuals engaged in its prosecution.

EULER NOBCROSS.

South Hadley, 1856.

GEN. OLIVER'S ADDRESS.

In the paragraphs below we give a part of the Address of Gen. H. K. OLIVER, of Lawrence, Mass., before the York County Agricultural Society, in Maine, last autumn. The following is a portraiture of The Doubting Farmer. It will touch a good many "under the flank," who, we fear, will rather wince and kick, than "come up to the collar" and mend their ways.

Now let us take a look at his barn. It is not quite so good for a barn, as the house is for a house,—and yet it should be better. The barn, at any rate, should be the best of its kind, the most convenient and the most comfortable. But the barn of our practical friend will answer, he thinks, just as well for his cattle, as it did for the cattle of his father, and so, with a nail and a patch, he makes it do. To be sure, it is rather shaky and roughly put together. The shingles have been on twenty-five years, but he guesses they'll stand the sun and snow of another year. The boards, neither clapboarded nor battened, and yielding to the fickle influences of our varying rain and shine, have, for years uncounted, swollen and shrunk, in unequal degree, till at length the emaciating process has made them to shun all actual contact, as if afraid of each other, and yawning seams gape wide, from eaves to underpinning; and as the knot holes, not "like angels' visits, few and far between," have not retained their sweltered and dried-up knots, there is a "pretty smart chance" that the cattle will be well ventilated summer and winter. To be sure, a book-reading farmer once told him, that the warmer his cattle were kept, the less food they will consume, but he don't see why it should be so, and he don't believe it. And so the old barn, shivering with ague-fits, groans and creaks and whistles in the cold blasts of winter. And so shakes the old shed that joins the old barn to the old house, and serves as a shelter for the old cart and old plow and old harrow, above which, on the old beams, roosts the cold-benumbed hens and the old shivering cock, with their frozen combs, keeping all beneath them in a state of unseemly nastiness.

In the matter of drainage, he knows nothing, and, of course, does nothing. Nor does he keep his grounds well cleared of stumps and stones, and his stone-wall free from brush and weeds. The stumps he thinks will, by and by, rot out, and the stones will be needed to mend the walls which his father put up, and when mending-time comes, he will get hold of them. It would be a waste of time and labor to move them twice,—once to clear the field and once to mend the wall. To be sure, the plow don't go quite so easy nor so deep down where they lie, and sometimes a stoutish rock, or a young boulder among them, gives the plow a hard knock and yanks the cattle's necks with a sudden

strain, but they don't mind it much, and in fact are used to it, like eels to skinning, and so, on the whole, he will let the stones stay awhile longer. He plows, he plants, he reaps, he mows, he gathers in his crops, as did his fathers before him, excepting that *they are not quite so heavy as they used to be*, when he was a boy, and this he thinks is owing to causes beyond his control, such as more rain, or more sun, or more cold, or more heat, or more something, or more nothing, than there used to be in his good old father's time. He puts on manure, fully as much, and of the same kind, and in the same manner, as was done by a long line of "illustrious predecessors," but somehow or other, *not with the same successful results*. Something must be the matter, but he cannot tell what. His neighbor talks about finding out what the soil may have lost, during the long time it has been under cultivation, and of restoring the lost elements, and so bringing back the soil to its original strength, but this is all Greek to him, and he don't understand nor believe in Greek. He has never attempted root-crops, though strongly advised so to do, for he thinks the experiment would be of doubtful success, and would require more labor than he is willing to expend, and more hands than he thinks he can afford.

We wish we could extract more liberally from this excellent address, as it is full of capital hits at the loose ideas that prevail about farming. The writer so mingles wit with wisdom as to make his subject exceedingly *attractive* while he instructs.

For the New England Farmer.

THE FILBERT.

That the filbert can be successfully cultivated in this latitude, there appears to be no doubt, as two species, the *corylus rostrata* and *americana* are found growing wild in abundance. They are known by the name of hazle nut, in this region. There is also a species native in Europe, which is there called hazle nut, and it is said the filbert is but an improved variety of it. Our native kinds are both shrubs, but some of the cultivated kinds attain a height of thirty feet. William Cobbett sent a few trees to Dublin, Pennsylvania, not more than fifty years ago, which were planted, and seventeen years after he states that he saw them when they had attained the height of twenty feet, and produced five or six bushels in a year, measured in the husk; a yield seldom witnessed in England. He earnestly recommends the cultivation of them, and thinks the climate extremely favorable. In Europe, an acre of land will sometimes produce two hundred dollars worth of nuts in a year. In Italy, and Spain, they are cultivated to much extent, and the returns are very profitable. They may be propagated by layers or grafting.

It is desirable that the experiment of cultivating the filbert, should be tried here, as there are vast quantities consumed in the United States; and as we have almost every variety of soil and climate, the effort must be successful. It would seem that New England is as well adapted to the purpose as any other section, from the circumstance of two species, both perfectly hardy, being found indigenous in many parts of it.

O. V. HILLS.

Leominster, Mass., 1856.

For the New England Farmer.

PORTRAITS FROM THE FIELD AND FARM-YARD.

BY WILSON FLAGG.

THE OWL.

In my portraits from the field and farm-yard I must not omit the Owl, which is one of the most remarkable of the feathered race, and in one way or another familiar to all persons. There are about fifty species belonging to this tribe; but I shall select for my sketch the common little brown owl, (*strix nœvia*) which is one of the typical owls, and affords a fair specimen of the race. The owl has been, by naturalists, compared with the cat, to which he bears a strong resemblance in his face, in the capacity of his vision, and in his predatory and nocturnal habits. Like the cat, he sees most clearly by twilight, or by the light of the moon, seeks his prey in the night and spends the greater part of the day in dozing. He has a large head, round, full and glaring eyes, set wide apart, and partially encircled by a disk of white feathers, adding a peculiar and significant expression to his face. His hooked bill turned downwards, so as to resemble the nose in a human face, the general flatness of his features, and his upright position, yield him a singularly grave and intelligent look; and it is undoubtedly on account of these appearances, that he was selected by the ancients as the emblem of wisdom, and was consecrated to Minerva.

After his nocturnal foragings, he rests quietly during the day in some secluded retreat, where he is not likely to be interrupted. His fear of disturbance and his wish to escape the intrusion of other birds has accustomed him to make his abode in desolate and ruined buildings, and with these solitary haunts his image is strongly associated. In such places he resides during the day, and there in company with his mate he builds his nest and rears his young. In thinly settled countries he selects the hollows of old trees and the clefts of rocks for his nest and his retreat. All the small species of the owl, however, seem to multiply with the increase of human population, living upon the rats and mice that accumulate in old barns and granaries. The habit of seeing the owl in these desolate haunts which are supposed to be the abode of wicked spirits, has caused many superstitions to be attached to his image. His voice is supposed to bode misfortune, and his spectral visits are regarded as the forewarnings of death.

The owl is remarkable for the acuteness of his hearing, which enables him to distinguish the slightest sounds; and the plumage of his wings is extremely soft, causing him to fly with so little noise as to be scarcely perceptible. Hence, while he is silent in his own motions, he can perceive the least motion or sound from any other object, and is able to overtake his prey by coming upon it silently in the darkness. The stillness of his flight is one of the circumstances that adds mystery to his character, and has undoubtedly contributed to render him an object of superstitious dread.

When the owl is forced from his retreat in the daytime he is singularly defenceless, and is at the mercy of his enemies, who seem to be aware of his helpless condition. On such occasions many of the smaller birds assail him and annoy him in various ways, while his purblindness prevents him from defending himself. This is no more than just retaliation

upon an enemy who selects the hour when other birds are sleeping, to attack and devour them. It is probable that while sitting upon the branch of a tree or on a fence, after having been driven from his hiding place, he has formed a subject for painters, who have always delighted to introduce him into their pictures, to add expression to a desolate scene—an old deserted house, a ruined tower or an ancient belfry. Hence the owl deserves in a special manner to be named among those animals which are called picturesque.

I will not enter into a speculation concerning the origin of those agreeable emotions which are so often produced by the sight of objects that are suggestive of ruin or desolation. Nature has beneficially provided that many an object which is capable of communicating no direct pleasure to our senses, shall send joy to the heart through the medium of sentiment. The figure of the owl is closely allied with the sentiment of ruins, and to this feeling of the human soul we may trace the pleasure we derive from the picture of this bird in his appropriate scenery. Two doves upon the ragged branch of a tree in a wild and beautiful sylvan retreat, are not more suggestive of pleasing fancies to the mind, than an owl sitting upon an old gate-post near a deserted house.

I have often listened with peculiar pleasure to the distant sounds of the wings of night birds, on a summer evening in the country, while they are flying over short distances in the woods. There is a mysterious feeling excited by these sounds, that seems to heighten the pleasure derived from the delightful influences of the season. But these emotions are nothing in intensity to the scarcely perceptible sound attending the flight of the owl, as he glides by in the dusk of the evening, or in the dim light of a summer moon. Similar in its influence is the dismal voice of this bird, which is heard most frequently during the latter part of summer and in the autumn, when the young ones are out, and use these cries for purposes of mutual salutation and recognition.

These notes in the species which is the subject of my remarks, are singularly wild and not unmusical. They are far from being disagreeable to my ear, though they have a cadence which is expressive of dreariness and melancholy. These notes might be correctly represented on a C flute by commencing with D in the octave, and running down by semitones to one octave below, and constantly repeating this performance, for the space of about a minute, with occasional pauses and slight variations. The owl does not alur the passage, and the separate notes in the scale may be distinctly perceived, with intervals of about a semitone.

The owl is not usually regarded as a useful bird. Perhaps the generality of the tribe deserve to be considered only as mischievous birds of prey, and no more deserving of mercy and protection than the hawks to which they are allied. Not so should we regard the little red owl, or his congener, the barn owl of Europe, or any of the smaller species. The red owl is very serviceable as a destroyer of vermin; and I have no doubt that were the species to be domesticated, one pair of owls would keep our enclosures almost entirely clear of rats and mice. The owl flies low, because his prey consists of those small quadrupeds which are generally out by twilight. It is probably on account of his low flight that he is so seldom seen when on the

wing. He is said by those who have observed his habits to be remarkably diligent and expert in taking his prey, and to be in the habit of destroying and carrying to his nest a greater amount of provision than is necessary for the supply of his family.

The reader may form a conception of the usefulness of the owl from the following remarks of Mr. Waterton: He says that "if this useful bird caught its food by day, instead of hunting for it by night, mankind would have ocular demonstration of its utility in thinning the country of mice; and it would be protected and encouraged everywhere. It would be with us what the Ibis was with the Egyptians. When it has young, it will bring a mouse to the nest every twelve or fifteen minutes. But in order to have a proper idea of the enormous quantity of mice which this bird destroys, we must examine the pellets which it ejects from its stomach in the place of its retreat. Every pellet contains from four to seven skeletons of mice. In sixteen months from the time that the apartment of an owl on an old gateway was cleaned out, there has been a deposit of above a bushel of pellets."

• • • When farmers complain that the barn owl destroys the eggs of their pigeons, they lay the saddle on the wrong horse. They ought to put it on the rat. Formerly I could get very few young pigeons, till the rats were excluded effectually from the dovecote. Since that took place, it has produced a great abundance every year, though the barn owls frequent it and are encouraged all around it. The barn owl merely resorts to it for repose and concealment. If it were really an enemy to the dovecote, we should see the pigeons in commotion as soon as it begins his evening flight; but the pigeons heed it not; whereas, if the sparrow hawk or hobby should make its appearance, the whole community would be up at once; proof sufficient that the barn owl is not looked upon as a bad or even a suspicious character by the inhabitants of the dovecote." The English barn owl alluded to by Mr. Waterton, is likewise indigenous in America, though not so common as the red owl.

Few persons are aware of the vast amount of mischief which may be committed in our fields by field-mice, which, without some such check as that of the owl, would multiply with incredible rapidity. Mr. Jessie remarks in his "Gleanings" that "an extraordinary instance of the rapid increase of mice, and of the injury they sometimes do, occurred a few years ago in the new plantations made by order of the Crown in Dean Forest, Gloucestershire, and in the New Forest, Hampshire. Soon after the formation of these plantations, a sudden and rapid increase of mice took place in them, which threatened destruction to the whole of the young plants. Vast numbers of these were killed, the mice having eaten through the roots of five year old oaks and chestnuts, generally just below the surface of the ground. Hollies also, which were five or six feet high, were barked round the bottom; and in some instances the mice had crawled up the tree, and were seen feeding on the upper branches. Various plans were devised for their destruction; traps were set, poison laid, and oats turned out; but nothing appeared to lessen their number. It was at last suggested that if holes were dug into which the mice might be enticed or fall, their destruction might be effected." These holes were made in Dean Forest about twenty yards asunder, and from

eighteen to twenty inches in depth, hollowed out much wider at bottom than at the top; so that the animal when once in could not easily get out again. In these holes at least thirty thousand mice were found in the course of three or four months, and it was calculated that a much greater number were taken out of the holes by weasels, owls, magpies, &c. The food of the field-mouse is exclusively vegetable, and hence it is highly important to the farmer to prevent its increase.

"HOE OUT YOUR ROW."

One lazy day a farmer's boy
Was hoeing out the corn,
And moodily had listened long
To hear the dinner horn.
The welcome blast was heard at last,
And down he dropped his hoe;
But the good man shouted in his ear,
My boy, "hoe out your row!"

Although a "hard one" was the row,
To use a plowman's phrase,
And the lad, as sailor's have it,
Beginning well to "haze"—
"I can," said he, and manfully
He seized again his hoe;
And the good man smiled to see
The boy hoe out his row.

The lad the text remembered,
And proved the moral well,
That perseverance to the end
At last will nobly tell.
Take courage, man! resolve you can,
And strike a vigorous blow;
In life's great field of varied toil
Always hoe out your row.

HAY CAPS.

Enterprising, systematic farmers, who drive their work, and never have so much on hand at one time as to distract them, derive much benefit from the use of simple, cheap caps to cover their hay at night, or when there is a prospect of stormy weather. But those slipshod, crotchety fellows, who do everything in a hurry and always by halves, who hate books and manure cellars, and put a stone in one end of the bag when they go to mill, are not expected to find benefit in anything out of the kingdom of Old Foggydom! They wouldn't cover a hay cock with a cap—not they, they're too slow for that. They had rather let it lay and soak awhile in rain water, and get it in at their leisure, some day next week, perhaps. They don't know whether the cap should be kept on through a hot sunny day, or not, and they wouldn't kiss a pretty girl if they had the chance, because her lips were young! But that is not our taste. We go for the caps, for sweet hay, sweet lips, and young America generally, wishing Old Foggydom all the comfort it can find in its arm-chair with so many tantalizing objects about it.

A SIMPLE AND PROBABLY EFFICACIOUS ANTIDOTE.—A correspondent of the London Literary Gazette, alluding to the numerous cases of death from accidental poisoning, adds: "I venture to

affirm there is scarce even a cottage in this country that does not contain an invaluable, certain, immediate remedy for such events—nothing more than a dessert spoonful of made mustard, mixed in a tumbler of warm water, and drauk immediately. It acts as an emetic, is always ready, and may be used with safety in any case where one is required."

FARMERS' GARDENS.

As a general thing, farmers do not provide themselves with good gardens; at least, so far as the writer has travelled, he has seldom seen what he would call a good garden on farms. The excuse for this neglect is generally the same with all of them—they "have no time to attend to such small matters." And yet it may safely be asserted that an acre of ground appropriated to a good garden will be more profitable to the farmer than any other ten acres of the farm. The interests of the farmer, the comforts of his family, the good condition and health of his whole household, require such a garden on every farm in the country. And it should be a *garden*—not a mere excuse for one a mere weedy patch. It should be one so managed and arranged that every vegetable of a wholesome quality for human food should be raised in it in perfection, and at the earliest season. After a Winter's diet on solid and generally salt animal food, the human constitution requires the deterring operations of free vegetable and fruit diet, and, as a general rule, no one can dispense with it safely. Besides this, the natural appetite calls for it, and there are few pleasures that may be so safely and even beneficially indulged in. In the latter part of Winter and early in Spring, measures should be taken to secure *early* vegetables of all kinds capable of early cultivation. Details will not be expected here; there are other books and papers appropriate to such information; but I cannot help saying, that when I am at a farm-house, at a season when early peas, beans, cabbage, cucumbers, potatoes, green corn, lettuce, &c., are properly in season, and find none of these luxuries on the table—nothing but the *blue beef*, salt pork and beans or potatoes of Winter—I am free to say I do not envy that farmer's life nor his family their enjoyments. These very people are fond enough of such things when they go to the city, and it is not therefore want of taste. It is simply the fault of negligence. Why may not every farmer in the State have every kind of early vegetables on his table as early as any gardener near the cities can raise them? There is not a single reason why he should not, while there are a great many why he should. The gardeners have to incur a very considerable expense in procuring *hot* manure for their hot-beds, while the farmer has it in his barn-yard. The gardener has every thing to purchase, and draw a considerable distance, while the farmer has nothing to buy. The small quantity of lumber required is probably rotting on his premises. It would only be a source of amusement during Winter for him to construct the frame of a hot bed, and prepare the manure and bed for use. Having done this, and got his plants in a thrifty state, he can, in a short time, when the season arrives, get his garden ground in order and make his plantations. And then he will have these vegetable luxuries as early as many of his town friends can purchase them. It only requires a little industry and attention to accomplish

this, and, as said before, his enjoyment, his health, and even his interest, as well as the comforts of his family, will be benefited by it.—*Exchange*.

THE USE OF THE EYES.

The proper adjustment of the light is very important to the close reader and student. Alterations of light and darkness distress weak eyes, and debilitate those which are sound. The sudden transition from dark to light rooms, the degree of light in the study room, the manner in which the light falls upon the page, are all important considerations, though apparently trifling in themselves. Too little light debilitates the eye and compels over-action, while too much dazzles and confuses, and causes a morbid sensibility of the organ. The student should not, after sitting in the dark to meditate, suddenly commence his studies. There should be sufficient light to see easily. The light should be equally distributed, and not reflected or concentrated. The practice of wearing green shades is bad, unless there is a deficiency in the prominence of the eye or a peculiar weakness of the sight. Reading or writing by twilight or moonlight, and looking at lightning, are attended with danger to the sight. Sitting in front of a window with a book on the knees, sitting with the back directly to any open window, and permitting strong light to fall immediately upon the paper, holding a candle between the eye and the book, are all practices likely to debilitate the sight. The light should fall obliquely from above, over the left shoulder.—*Scientific American*.

NEW BOOKS.

THE FAMILY KITCHEN GARDENER. By Robert Buist. A new edition with twenty-five engravings. This is an excellent work, containing plain and accurate descriptions of the different species and varieties of culinary vegetables. Saxton & Co., N. Y., and 81 Washington St., Boston. Price 50 cents.

FRENCH UNIVERSAL EXPOSITION OF PROCREATIVE ANIMALS, and of Agricultural Implements and Products, for the years 1856 and 1857. A copy of the above has been received from the Secretary of State at Washington. It gives a list of the premiums, classes of stock and implements, and conditions of the Exposition.

TREATISE ON THE STRAWBERRY. By Samuel S. Brown. Price 15 cents. It contains about all the information necessary for a successful culture of the plant.

AN ADDRESS delivered before the York County Agricultural Society, October 4, 1856, by Gen. HENRY K. OLIVER, of Lawrence, Mass. Excellent. Twenty-five pages, small type, yet all excellent. The General has the happy faculty of so mingling wisdom with his wit, that while every page attracts, it also instructs. We shall find room in another column for some extracts, and only wish we could give the reader the whole address.

PROFESSOR ZADOCK THOMPSON.

We copy from the *Franklin County Journal*, Vt., the following memoir of Professor Zadock Thompson, of Vermont, a gentleman who did much to develop the advantages and charms of rural life,—a true friend of the farmer, and one who has left a healthful impress upon the region where he lived. We have been obliged to omit some portions of the Memoir as it was sent us, as the character of our journal will not admit very long ones.

PROFESSOR ZADOCK THOMPSON died at Burlington on the 19th day of January, 1856, of ossification of the heart. He was born in Bridgewater, Windsor County, Vermont, in the year 1796, and, at the time of his death, must have been in the sixtieth year of his age. His early life was a continual struggle with poverty, and his education was acquired while successfully combatting the evils of pecuniary embarrassment. At the advanced age of 27 years he was graduated from the University of Vermont, having for his classmate in 1823 and now living, the Hon. Frederick H. Allen, an eminent lawyer in Boston, and Warren Hoxie, of Westford, Vermont. Within a twelvemonth from his graduation he published at Montpelier, his "Gazetteer of Vermont," pp. 312, and, in 1833, he published, at Burlington, his "History of Vermont from its early settlement to the close of the year 1832," pp. 252. In the year 1832 he was editor of and principal contributor to the "*Green Mountain Repository*," a monthly magazine published for about a year in Burlington. After pursuing his study of theology, and occasionally teaching at the "Vermont Episcopal Institute" and elsewhere, he was prepared for orders and was ordained to the diaconate in the Protestant Episcopal Church by the Rt. Rev. Bishop Hopkins, in 1836. He subsequently preached in several parishes in Northern Vermont and New York, and supplied the pulpit at St. Paul's Church, Burlington, during the illness or absence of the Rector; but his feeble health prevented his assuming the active and onerous labors of a parish.

Ever since the publication of the books before mentioned, he had contemplated a larger and more comprehensive work which would embrace the General History of Vermont, both natural and civil. From 1838 to 1842 he devoted the greater part of his time to preparing and publishing his "Natural, Civil and Statistical History of Vermont."

The prosecution of this purpose necessarily brought him into contact or correspondence with the naturalists of the country. In completing his account of the birds of Vermont he was greatly assisted by Dr. Thomas M. Brewer, of Boston; in determining several species of reptiles and fishes, he was aided by Dr. D. H. Storer, also of Boston. For a full description of our molluscous animals, he was indebted to Prof. Charles B. Adams, then of Middlebury College, and to Prof. George W. Benedict, then of the University of Vermont. For his catalogue of plants, he was indebted to the late William Oakes, of Ipswich, Mass., to Prof. Joseph Torrey, William F. Macrae, and John Carey, Esq., and others. With these aids in his arduous labors, Prof. THOMPSON succeeded in embracing in his work every thing of special importance relative to the Natural and Civil History of Vermont;

and published it in so condensed and cheap a form as to place it within the reach of every family in the State, having but little regard to a pecuniary recompense from the sale of a book which had cost so much travel, research, time and expense in its preparation.

Prof. THOMPSON found time also to prepare annual astronomical calculations for the Messrs. Waltons of Montpelier, and to publish a valuable arithmetic and elementary work on the Geology and Geography of Vermont, for the use of schools, both prepared in the systematic, lucid and condensed manner which imparted so much value to all of his publications.

In 1845, Governor Slade appointed Prof. Charles B. Adams, State Geologist, who, with the approbation of the Governor, appointed the subject of this memoir one of his assistants in the field labor. Prof. THOMPSON and the Rev. S. R. Hall, the other assistant, visited and explored "more or less thoroughly" about 110 townships in one season; and Prof. THOMPSON was actively engaged in this important scientific labor until the Legislature of Vermont neglected to make an appropriation for a Final Report on the Geology of our State, and thus permitted the materials, manuscripts, books, and specimens belonging to the Survey to remain at Montpelier and Burlington, locked up in about fifty boxes. The brief and expressive Report of Prof. THOMPSON addressed to Gov. Coolidge, in October, 1849, was published in the appendix of the House Journal for that year, and is a sad commentary on the folly of which our State has been guilty in regard to the matter of a Geological Survey. After the suspension of the Geological Survey, Dr. Horace Eaton, Governor of the State in 1847, appointed Prof. THOMPSON to carry out the Resolution of the Legislature in relation to international, literary and scientific exchanges; and in pursuance of his appointment he presented the exchange system in its clearest light, so that it commended itself to the approbation of every benevolent mind. The preparation of the Report of "Proceedings and Instructions," which, by the bye, was beautifully printed in a pamphlet of 80 pages, reflected great credit upon Mr. THOMPSON, and upon the State, and it is greatly to be deplored that the historical interest which was then awakened throughout the State, by the visit of the Founder of the System of Exchanges, and by the labors of such men as Prof. THOMPSON, Hon. Highland Hall, of Bennington, Henry Stevens, of Barre, Daniel P. Thompson, of Montpelier, Prof. James D. Butler, then of Norwich, Vt., and others, should so soon and so thoroughly have subsided and become almost extinct.

In June, 1850, Prof. THOMPSON delivered upon invitation an address at Boston, before the Boston Society of Natural History, in which he made the announcement that "what he had accomplished in the business of Natural History, he had done *without any associates engaged in like pursuits, without having any access to collections of specimens, and almost without books.*" In that admirable address, (which by the way was printed by his devoted friend and neighbor, Chauncey Goodrich, Esq., in 1850, in a pamphlet of 32 pages,) he illustrated the *importance and difficulties of a thorough cultivation of Natural History, in country places, insisting that a habit of observation and comparison of objects of Natural History could be as quickly ac-*

quired in the country as in the city, and urging that the study of Natural History should be more generally taught in our common schools and colleges, for the obvious reason that such a study "would refine and improve the moral sensibilities of our people, and sharpen and invigorate their intellectual powers."

In such labors, beset with the difficulties so freely confessed before the "Solid Men of Boston" on the occasion of the delivery of the last mentioned address, he passed his quiet life. At one time he was a teacher of the exact science; at another time prosecuting his researches into Natural History; and then he might be found preaching in his modest and reverential manner the sublime doctrines of the Christian creed which he had adopted, and whether in or out of the pulpit, always seen and known as the industrious, patient, humble and exemplary disciple of Him who was born in the manger and died on the cross. Prof. THOMPSON thus won friends, not "in single spies but in battalions," friends who knowing the anxieties he felt to see the wonders of the great exhibition at London, in 1851, gladly put into his purse that "material aid," of which teaching and preaching and authorship had not gathered a superabundance. Chiefly through the kindness of friends, which he has beautifully acknowledged in one of his books, he was enabled to enjoy a trip to the Old World, "beholding the wonders of the great deep, and seeing and admiring the wonderful things of Nature and Art which lie beyond it." After an absence of three months, spending a few weeks in London and Paris and after travelling about 7500 miles, he came back refreshed in spirit and health to his humble dwelling at Burlington, and after a while yielded to the importunities of his friends, and published a neat volume of 143 pages, entitled a "Journal of a trip to London, Paris, and the Great Exhibition in 1851." Although this "Journal" is composed of notes for each day from May until August, jotted down when travelling or sight-seeing, for the private eye of family and friends, and with no expectation that they would ever be printed; yet they contain much that is new and valuable, and although published as a "thank offering to his friends," yet the reading public have perused it with equal pleasure and profit.

Since the publication of his History of Vermont in 1842, railroads and magnetic telegraphs have been introduced into the State, and other changes have taken place; and early in 1853, Prof. THOMPSON published an appendix to the History, chiefly in the department of the Natural History. This appendix, although, containing only 64 pages, is a most valuable supplement to his large work, and if his life had been spared a few years, as he says in the Preface, he might have re-written the whole history.

We have now arrived in chronological order at his last work upon which the professor was engaged when the summons came for him to join the majority and be gathered to his fathers. It will be remembered that the labors of Prof. Adams and his assistant had ceased in 1847 on behalf of the State. The cold shoulder of "men most noted for wisdom and virtue" was turned towards them, after it was an established fact "that as much labor was performed, and as much investigation effected, as were ever accomplished with the same expenditure in any other State." Prof. Adams' final report was

never made, and January 19th, 1853, he died on the island of St. Thomas, W. I., cut down in the prime of life and usefulness, when all that remained of the geological survey of Vermont was shut up in short hand in the field books of the State Geologist, and his assistants, or locked up in the fifty boxes of unticketed and untrimmed specimens at Burlington and Montpelier. Years after the field work was done, and when Prof. Adams was slumbering in his grave, the "men most noted for wisdom and virtue" discovered that they had made a mistake in arresting the progress of the survey. Then it was that Prof. Zadock Thompson was appointed by statute, State Naturalist, with the following duties: "To enter upon a thorough prosecution and completion of the Geological Survey of the State, embracing therein full and scientific examination and description of its rocks, soils, metals and minerals; make careful and complete assays and analyses of the same, and prepare the results of his labors for publication, under the three following titles, to wit:

1. Physical Geography, Scientific Geology and Mineralogy.
2. Economical Geology, embracing Botany and Agriculture.
3. General Zoology of the State."

Session Laws, 1853, pp. 45, 46.

He was pursuing the labors of this responsible task which the State had honorably to herself and to him, commissioned him to perform, when death bereaved his family and friends and the community of a man, who in all things was the type and exemplar of his race. On the same day, three years before, his predecessor went to his long home, both leaving the matter of a geological survey in which both delighted, and in which both had spent long nights and laborious days, still unfinished.

At the time of his death, Prof. Thompson was a Professor of Natural History in the University of Vermont, an institution to which he had been greatly attached since his graduation in 1823; and the eminent self-taught naturalist who had devoted his life in a quiet and unpretending way to independent scientific inquiry and the labors of authorship and the ministry, died in his humble dwelling near the University, with his intellectual armor on, ere his "eye had grown dim, or his natural force abated." Dr. Thomas M. Brewer, editor of the *Boston Atlas*, and a naturalist of great research and acquirement, thus alludes in touching language to the death of his valuable friend:

"His loss, both as a citizen and a public man—he has not left his superior in science behind him, in his own State—is one of no ordinary character. We have known him long and well, and in speaking of such a loss, we know not which most to sympathize with, the family from whom has been taken the upright, devoted and kind-hearted head, or that larger family of science, who have lost an honored and most valuable member. Modest and unassuming, diligent and indefatigable in his scientific pursuits, attentive to all, whether about him or at a distance, and whether friends or strangers, no man will be more missed, not merely in his immediate circle of family and friends, but in that larger sphere of the lovers of natural science, than Zadock Thompson.

At any time we should hear of the death of such a man with deep regret and grief, and these feel-

ings are increased in the present case, when we remember that he has been called from the field of his usefulness when the great work of his most useful life has been but partly done. But he has been taken, and we may not murmur at the inscrutable decree by which that work has been arrested, just as it was on the eve of completion. New England may have more brilliant and more popular illustrators of her natural science, but one more thorough, or more devoted, we have never known; nor one who once known, has been more honored and esteemed by naturalists, or beloved by friends, than the late Professor Zadock Thompson."

After these elegant and deserved tributes, [a portion omitted.—ED.] little remains for our partial pen to add. We have known him well since 1834, in his various relations, as a teacher, as a clergyman, as a professor, as a correspondent and a friend. During the quarter of a century that he devoted himself to the instruction of youth, to the labors of authorship and to scientific research, he exhibited himself as an unselfish, and unambitious man. He loved his pupils, his friends, his church, his associates, his State, his town, and above all, his home. As a teacher, he was kind and thorough; as a clergyman, what has been appropriately called his "deep and unconquerable modesty of spirit" prevented his ever rising above the Diaconate in the Protestant Episcopal church.

As an author, he has won high distinction for the profundity of his research, and wonderful accuracy of date and detail has characterized all of his historical productions. His astronomical and meteorological observations were carefully made and noted, and he was one of the best and most reliable correspondents of the Smithsonian Institution.

As his life has been chiefly spent in the development and illustration of the natural productions of his native State, the scientific world, and especially Vermonters, will cherish his memory as that of a man who devoted his life with energy and singleness of purpose to objects of lasting interest and usefulness to the whole community.

Let the memory of such men be kept in perpetual bloom!

SUUM CUIQUE.

St. Albans, Vt.

A WIFE'S INFLUENCE.

A woman, in many instances, has her husband's fortune in her power, because she may or may not conform to his circumstances. This is her first duty, and it ought to be her pride. No passion for luxury or display ought to tempt her for a moment to deviate in the least degree from this line of conduct. She will find her respectability in it. Any other course is wretchedness itself, and inevitably leads to ruin.

Nothing can be more miserable than to keep up appearances. If it could succeed, it would cost more than it is worth; as it never can, its failure involves the deepest mortification. Some of the sublimest exhibitions of human virtue have been made by women who have been precipitated suddenly from wealth and splendor to absolute want.

Then a man's fortunes are in the hands of his wife, inasmuch as his own power of exertion depends on her. His moral strength is inconceivably increased by her sympathy, her counsel, her aid. She can aid him immensely, by relieving him of

everything which she is capable of taking upon herself. His own employments are usually such as to require his whole time and his whole mind.

A good wife will never suffer her husband's attention to be distracted by details to which her own time and talents are adequate. If she be prompted by true affection and good sense, she will perceive that when his spirits are borne down and overwhelmed, she, of all human beings, can minister to its needs. For the sick soul her nursing is quite as sovereign as it is for corporeal illa. If it be weary, in her assiduity it finds repose and refreshment. If it be harassed and worn to a morbid irritability, her gentle tones steal over it with a soothing more potent than the most exquisite music. If every enterprise be dead, her patience and fortitude have the power to rekindle them in the heart, and he again goes forth to renew the encounter with the toils and troubles of life.—*Life Illustrated.*

MASSACHUSETTS TRANSACTIONS.

ECONOMY.

We have already acknowledged the reception of the Third Annual Report of the Secretary of the Massachusetts Board of Agriculture, and have noticed very briefly some of the contents of this Hand-book of Agriculture in our Commonwealth. And now as we lay down the volume after another partial examination of its contents, and with a fresh admiration for the excellency of its arrangement, we feel impelled to write a lecture on Economy! We hardly know how the perusal of this volume has suggested this topic. It may have been an indistinct view of the labor and expense which the book itself must have cost, freighted as it is with so much information upon the details and results of the labor expended upon the soil in all parts of the State, from the cranberry meadows of the Cape-coddors, to the sweet-scented buttries among the hills of Berkshire. It may have been a *twinge* of the purse, as we read with so much interest the dissertation of the Secretary upon farm implements, and examined with so much curiosity the many cuts with which his subject is illustrated; or, the remark of the Norfolk County Committee on the same subject, that, "There seems to be a principle at work which requires that, in proportion as the fruits of the earth are aided in their production by beautiful and superior implements, the more costly they shall become." * * * * "What is the peculiar blessings of improvements so greatly extolled, if the result of their introduction is chiefly seen in the enhancement of the price of the necessities of life, to such an extreme as to drive people from the homes of their childhood to a country where the boasted civilization of our sections have but just commenced to dawn?" Perhaps our mind was directed to the subject of economy by the several reports on Domestic Manufactures; for the chairman of the Hampshire, Franklin and Hampden Committee says, the times have so

changed within the memory of some now living, that of many households, to whom a few years since the description of Solomon would apply,—“Who seeketh wool and flax, and worketh diligently with their hands,” it may now with truth be said—“they toil not, neither do they spin.” The valuable selection of agricultural Addresses, which occupy the 130 last pages of the volume, as they discuss “Chemistry and Farming,” “The condition of Agriculture,” “Farming in New England,” “The Farmer’s Wants,” “The Farmer’s Errors,” “The Future of Agriculture,” “Practical Suggestions on Farming,” “Relations of the East and West,” “The Farmer,” “Chemistry of Agriculture,” and “Agricultural Societies,” may have set us thinking of Economy.

What great thoughts these addresses suggest! What noble fields they open to our view! How much there is yet to learn, how much yet to do! Would that we could whisper in the ear of every young farmer in New England, be economical; save your money, save your strength, save your time! Save them for your farm—save them for your mind—save them for New England. Let others wear fine coats; let others enjoy the

“Midnight dances and the public show,”

let others build large and costly houses for the admiration of passers-by, and fill them with expensive furniture because their neighbors do; let others find themselves obliged to go West, to hide themselves from the results of their extravagant notions. They will be sorry for it. We fully believe that it is want of economy—a vague hope of getting into some place where their own circumstances and the example of their neighbors shall compel them to be less extravagant—that is driving thousands from New England, and from comforts and conveniences which they find they must have here, but which they, strangely enough, think they can do without, just as well as not, when they but once get to the West! It is extravagance, and not as the Norfolk committee say, the “superb instruments which have now become objects of attraction, and almost veneration, in the crystal palaces of the world,” that is driving our people from the “homes of their childhood.” We might enumerate many of the evils of extravagance, but we think it enough to charge that vice with impairing our enjoyment of such publications as this Third Report on the Agriculture of Massachusetts, by reminding us that many have not the means of profiting by its suggestions.

The great want of New England farmers, is capital—is the money to cultivate as well as they know how, and as well as they can learn how, to do it. And probably in no part of the world have an equal number of farmers so much capital invested in fine clothing, costly houses, expensive furniture, nice carriages, and other luxuries, that add nothing

to their resources, as farmers, but draw largely upon them for repairs.

Perhaps the drift of this article may be best illustrated and closed by an example, which occurs to our mind. Among our acquaintances, are two farmers of nearly equal wealth. Some five years ago the wife of one of them fixed her heart upon a sofa. Most of her friends had one, and her snug little parlor, she said, looked vacant. By saving a little here and there, eighteen dollars were laid aside, and the coveted article was wheeled into place. The other family, in like manner, set their hearts on some nice fruit trees. Fifty trees cost no more money than the sofa; yet they cost too much to be thrown away, and extra pains were taken to make them grow. They are beginning to bear. Two or three kinds of apples, as many of pears, and a dish full of quinces, were gathered from these thrifty trees last fall, and we have seen the blossoms upon them again, this spring.

Twenty dollars would buy the sofa to-day; two hundred might buy the trees, and twice that sum might be refused. But remember! we wish to see a good sofa in every farm house, but not at the expense of those things from which must spring the farmer’s chief support.

For the New England Farmer.

UNMERCIFUL BEATING OF ANIMALS.

There is no scene in the ordinary walks of life more revolting, or which more keenly stirs up our indignation, than that of a creature calling himself a rational man, in a fury of passion, unmercifully beating, for some real or imagined fault, a dumb animal, as he says, “to break him of it;” but probably, in reality, mostly to gratify his infuriated anger. One can hardly look upon a sight more fiendish, or be engaged in an act really more disgraceful to himself. It is a singular fact that some men never have an animal which is not, every time he is exercised, guilty of some misdemeanor, in their opinion, and which calls for harsh treatment. This rash way of dealing with the brutes may gratify a savage or peevish disposition, but it is anything but economical as a remedial agent; as in nine cases out of ten it aggravates the fault charged upon the animal, and originates others, for which, of course, he must in due time be corrected. He will be apt to partake largely of the fractious nature of his keeper, or become shy and apprehensive, whenever he approaches him, and avoid him if he can. His obedience and general service will be that which *fear* renders in a reluctant manner; and not that which he renders with cheerfulness. It represents, too, the man engaged in it as possessed of anything but a noble and manly frame of mind. He certainly cannot, in the heat of passion, be in a state of mind to do justice to the animal, and will be in great danger of injuring him, as his better judgment will have but little to do with the matter, or with him, at such a time. In fact, we should not be able to discover at such a moment that he was possessed of any such gift; and from the development he makes of himself, while thus

engaged, we should be entirely at loss to know what place in creation to assign him; or what station, in the great chain of animated creation he is designed to occupy.

J. & E.

July 5th, 1856.

REMARKS.—There is scarcely a week but we witness in Boston examples of "man's inhumanity" to his best servant, the noble horse. The first is in the constant and tantalizing use of the abominable check-rein, which causes more anguish to the horse ten times over than all the beating he gets, and the second in overloading and then scourging him because it is out of his power to back or draw the load. We wish there were a city ordinance preventing any teamster from carrying a whip which should weigh more than two ounces.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 16.

IRELAND.

The history of Irish agriculture is as mournful, as the histories of the agricultures of England and Scotland are brilliant. But there are important lessons in it, or I would not attempt this sketch.

In soil, Ireland is superior to England. The conformation of the country is peculiar; mountains range along nearly the whole extent of the coasts of the island,—the interior being a vast plain, and, for the most part, highly fertile. Ireland contains about twenty million acres, exclusive of lakes. The climate is milder and damper than in England, vegetation is luxuriant, and not without reason is the shamrock or clover adopted as the emblem of Ireland. Its southern coast enjoys a perpetual spring, owing to the ocean current of the gulf stream passing along from the tropics, and myrtles grow there in the open air.

No country has greater facilities for water carriage, interior as well as exterior. Immense lakes afford unexampled means of transport; the Shannon, the finest river in Great Britain—half river and half lake—extends nearly across the island; other rivers equally navigable flow in all directions from different lakes, and the coast is everywhere indented with bays and harbors, the most capacious.—Four large cities or capitals, Dublin, Cork, Belfast and Limerick, are situated, as it were, in the centre of the four faces of the island. The whole island, except Connaught and part of Ulster, has great agricultural capacity, and the soil of some parts of it is the richest soil in the world with a calcareous subsoil.

This is the description of a splendid country. Yet who has the heart to repeat its history of misery, poverty, woe, famine and emigration.

The absence of capital and skill were apparent a few years ago, everywhere in Ireland, and the imagination fails to appreciate the loss and destitution of a country, which is so deficient in agricultural capital. Let us try to help the imagination by facts. What was not wanting in Ireland? It was without buildings, fences, roads, drainage, manures; deficient in cattle, cows, sheep and pigs, in plows, carts and horses,—the spade being almost

the only implement of husbandry; deficient in turnips, beans, artificial grasses, wheat, barley, stored harvests, milk and cheese—oats and potatoes being the principal food. To have furnished Ireland with the capital which she lacked in sheep alone, as compared to England, would have required a hundred millions of dollars. Two hundred millions of dollars would have been necessary for other kinds of cattle, six hundred millions for drainage, and a like sum for the construction of more comfortable dwellings, roads and fences, and for necessary implements of husbandry—in all say fifteen hundred millions of dollars, which would have been only about \$80 the acre. Certainly a much larger sum has been absorbed by England.

This statement shows not only the destitution of Ireland, and one cause of its misery, and the hopelessness of making good, except after long time and effort, the resources which should have been accumulated through and by past generations; but it shows that the capital which is connected with and necessary to a prosperous agriculture is immense, and that a State which has it not must labor long and suffer much, before it can lift itself into a condition of prosperity. But Ireland was not only destitute of agricultural capital, but it was almost without commerce and manufactures. But if it had had commerce and manufactures, and was destitute of agricultural wealth, it would have had no well-founded prosperity. A State is but half a State, if it have a commerce rich in the wealth of the Indies and all seas, if it manufacture the marvels of all handicrafts, tapestries and porcelain and rich furniture, cottons, woollens and shoes; if it possess machinery as ingenious as the human mind and apt as the human hand, and artisans and craftsmen who understand all the arts of luxury and refinement, as well as the arts of common life; yet, if it have not an agriculture turned to the elementary purpose of procuring food and clothing, rich in crops and sheep and cattle, in bread and meat, and a rural population of large aggregate wealth, spread over the face of the country, such a State is weak and unsound; a seam and fracture will be found running through its structure, from its battlement down deep into its foundations. Let Massachusetts, while it rejoices in the development of its commerce and manufactures, beware how it neglects its agriculture.

But these thoughts need not be pressed in regard to Ireland. Her condition suggested only the idea of destitution of everything, except a superabundant population, a few gentlemen's parks, and a few cities. The rest was neglected pasture land and cabins, and a few acres around cultivated with the spade and devoted to potatoes.

Large property ruled supreme in Ireland. The island was divided into immense estates of from one thousand to one hundred thousand acres, and the greater their extent, the more wretched their condition. The advocates of large properties, who attributed to large property all the agricultural prosperity of England and Scotland, were perplexed when they turned to Ireland. On the other hand, though properties were large, farming was small, and the advocates of small farming were equally perplexed by Ireland; for here were hundreds of thousands of farms below five acres, and nearly as many more of from five to fifteen acres, and only fifty thousand above thirty acres. Yet, on every hand were wretchedness and poverty. All, propri-

etors and farmers, seemed bent on a common ruin by ruining the common wealth, the soil. Everything was taken from it, and nothing added to it. Capital was wanting and the skill to employ it.

One thing marks the agriculture of England as superior to that of every other country. It is that the productions of domestic animals, in England, annually is greater in value than the annual crops of England; or, in other words, that the animal produce is greater in value than the vegetable produce. This is always a sign of an amelioratory agriculture. The reason is plain; animal manures are the great means of increasing the fertility of the soil—the more animals the richer the agriculture, the richer the agriculture the more domestic animals—cause and effect, or rather each cause and each effect. No fact, if it be one, makes more against the agriculture of Massachusetts, than that I commented on in a former number—that the sheep and pigs in Massachusetts diminished 177,000 from 1840 to 1850. But in Ireland, the value of the crops was double the value of the animal produce—sure harbinger of a decaying agriculture. Besides, the whole value of the agricultural produce of the island, animal and vegetable, gave to each person but \$20 the year, and much of this was exported to absent proprietors, in kind; while that of England afforded each person \$40 a year, consumed at home.

Ireland formed one immense pasture country for which by nature it is best fitted with arable lands in small holdings, cultivated chiefly by the spade and devoted to potatoes and oats; yet in 1846 it contained eight millions of people. In such a country, with such an agriculture, how could such a population have been brought into existence, or how existed without the potato—a vegetable which furnishes, especially in Ireland, the largest quantity of human food upon a given surface, yet exhausts without renewing the means of production. The true place of the potato in a well-ordered economy, is as a plentiful provision for cattle, and as a supplement to the food of man—a resource, also, if other crops fail. But it formed in Ireland of necessity three-fourths of the food of the peasantry, and oats the other fourth. As long as these two productions could be obtained the population managed to exist, and unfortunately to multiply, but in wretched poverty.

How came Ireland in this wretched condition? It is said the Irish character has peculiar failings. I am willing to admit that the Celtic race has not the same degree of energy as the Anglo-Saxon, but this cannot account for everything. It is said the Catholic faith has an enervating influence on the Irish. This assertion may be, in some respects, well founded; for it is true, that in general, the Protestant nations of modern Europe exhibit a steadier and more decided character than the Catholic. But it has not always been so, and even now the remark is not absolutely just. Spain and Italy preceded Holland, England and Germany in civilization. Catholic Belgium, and to a certain extent, France, are not now much inferior to most Protestant countries.

But the Irish in America reply to all these imputations. As soon as they put their feet in our soil, these demoralized, degraded and improvident beings become changed, and are among the most industrious in our land. As soon as they have the hope of bettering their condition, they better it.

They own two-thirds of the immense deposits of our savings banks, and have sent as much more to help their friends in Ireland. All the prejudices in the world cannot set aside these facts.

How then came Ireland into its wretched condition? The answer dates back in history. Ireland was too near to England, it was conquered, confiscated, seized upon, oppressed by the unbending, exclusive, rough-mannered English. Conquest and confiscations of former days, followed by oppression since, changed the destiny and fortunes of this fair island. Our fathers and the Irish both suffered under English oppression, and fled from it; and in both cases, religion mingled with and increased the bitterness of strife; but the Irish suffered more, far more, than our fathers.

England conquered Ireland and made Englishmen owners of its soil, by confiscations of the estates of the native Irish—masters of its government by excluding Irish Catholics from all participation in it, and made the Irish helots and laborers on the soil which their fathers owned. Stripped of their possessions, disfranchised on account of their religion, the Irish hated the new proprietors of the soil, and the proprietors resided in other lands, for fear of personal violence. Intestine strife and warfare ensued, and descended from generation to generation. A wrong done in the world never dies, but usually multiplies itself in miseries by the force of human passions, to the doers and the sufferers, and to their descendants. So it was with the conquest and confiscations in Ireland. There was peasant warfare, murders, plunderings, and burnings on the one side—government, bayonets and law on the other. There was the cry of "Ireland for the Irish," answered by the cry of "down with the Catholics;" the meteor-like eloquence of Emmett, Grattan and O'Connell shone over Ireland's wrongs, but government replied only by capital trials and bayonets.

But the Irish sunk deeper in poverty, and yet amidst their misery multiplied in numbers; and proprietors rejoiced that wages would be lower and rents higher.

At last, England recoiled from her work, granted Catholic emancipation, and sought in earnest to undo the wrongs of centuries. But it was too late. Man could not repair such evils. The question remained to be solved by God, and has proved a terrible solution. All that long arrear of crime and error was to be atoned for by a terrible catastrophe. In 1846 the potato disease made its appearance, destroying three-fourths of the crop, while the oat crop was equally short. The English government, alarmed at the prospect, took the most active measures for bringing supplies from all quarters; it took half a million laborers into its pay, and spent, in relief of all kinds, fifty millions of dollars. Individuals also made great sacrifices. But these tardy measures of kindness did not arrest the evil. Famine was universal, and lasted several years, and it was found by the census of 1851, that one million of a population of eight had died of starvation and misery.

This frightful calamity effected what years of war and oppression had failed to do—it subdued Ireland. When the Irish beheld the loss of their chief article of food, they saw there was no longer room for them on their native soil. They had rejected the idea of emigration as a flight before the enemy; but they now suddenly passed to the oth-

er extreme. A current or rather torrent of emigration set in, and in seven years a million and a half of persons embarked for America, and the current still flows. Ties of religion and country could no longer bind them to a land of misery and death. The state of warfare ceased. England found in the event her safety and her punishment. God, it may almost be said, had made peace out of solitude.

What was before impossible in rural economy, now became possible; the great division of farms is no longer matter of necessity. In place of 700,000 farms, there may now be half the number. Potatoes and oats which had been grown to excess, may give place to other crops; the four-course system may be extended; cattle, which were neglected because the population could not get enough poor food to feed themselves, may be multiplied. Wages will be higher and capital will slowly accumulate in the farmers' and laborers' hands. If manufactures and commerce develop themselves, capital may yet enrich the Emerald Isle. But farming capital is yet very deficient there.

Ireland owes to Sir Robert Peel one great measure of relief for which it will long bless his memory,—the Encumbered Estate act. The object of this act was to facilitate the sale of estates hopelessly encumbered with mortgages and other incumbrances. Nearly all the southern and western counties of Ireland were hopelessly insolvent.—Around all property hung a frightful host of mortgages and mortgages and annuities,—the claims of some of them dating back to the time of Cromwell. Nobody owned the lands and everybody owned them; no one had the power to improve them. This legal plague, born of poverty, struck the land with barrenness. Sir Robert Peel caused parliament to enact that three commissioners should be appointed for the sale of encumbered estates; that the process before them should be rapid; that the purchaser receiving a title under their conveyance, should have an indefeasible one; that the purchase money should be distributed by the commissioners to those entitled to it. No single measure has done so much to regenerate Ireland. Within three years after the commissioners entered on their duties, they had petitions before them for the sale of 2500 properties, charged with mortgages to the extent of a hundred and fifty millions of dollars. At the sales, a majority of the purchases are made by the Irish, a pleasing fact.

This sketch of the agriculture of Ireland may remind the reader of a work by an Irish author, on the "Reptiles of Ireland," who devoted a chapter of his volume to snakes, and had nothing to say about these reptiles, except that there are no snakes in Ireland. But if there be no good farming in Ireland, there are warnings enough of the dangers and evils of bad. That unhappy country shows that when crushing debt exists upon the land, there is misery for the farmer, and exhaustion of the soil; that when agricultural capital is wanting there can be no agricultural prosperity, and that neither by large farms nor small farms, can the result be avoided; that the accumulation of this capital is the result of much labor, through many generations; that there can be no good agriculture, unless there be on the land great numbers of domestic animals, and if the agriculture be truly prosperous, the annual animal produce will be greater in value than the annual crops; that a country cannot escape the danger of famine, if it

rely for its food on only one or two crops; and it shows that dreadful lesson of Divine Providence, that a wrong done never dies, but that "the iniquity of the fathers is visited upon the children unto the third and fourth generation." M.

"HOW COUNTRIFIED."

I saw a manly farmer, a champion of the soil,
With his neat, though homely garments, and look of honest
toll;

With wealth of heart, and wealth of hand, brown beauty in his
face,

He stood within your city, and I marked his modest grace;
And many passed with stately step, in broadcloth and in
pride,

But murmured, as they looked on him, "O, my! how countrified."

I saw an aged lady, a Deborah past her prime,
Who'd measured years of usefulness, content to bide her time;
For a seat within a stage-coach, I heard her ask one day,
When one with face like Esau, (no birthright by the way,)
 From underneath a cloud of smoke, said, "Can't she ride out-
side?"

I'm sure there is no room within for one so countrified."

In learning's classic temple, with an open brow and high,
Stood one of nature's gentlemen, bright genius in his eye,
Yet bore his hands a trace of toil, his frame a store of health,
Of far more sterling worth, my friends, than all his classmates' wealth;

And high up wisdom's mount he stood, it could not be denied,
Yet in the distance one could see how very "countrified."

I saw a bounteous, well-spread board, in farm-house kept with
care;

And merry was that household band, for city friends were
there,

While the generous, soul-felt welcome, each kindly lip ex-
pressed,

Inspired with easy confidence, each cared-for, happy guest;
And while I listened earnestly to what each might confide,
I heard their numerous praises, but never "countrified."

Not many months from this, I saw the mistress of that farm,
At threshold of her last year's guest with satchel on her arm;
Straightway a little daughter, well instructed what to say,
Appeared to tell her country friend, that "ma had gone away."
As with disappointed countenance, the woman turned aside,
The lady murmured in her room, "She looked so countrified."

Shake off your cankering fetters, ye slaves to Fashion's king,
Declare your independence, and truthful offerings bring,
To deck the shrine of liberty; in virtue put your trust,
And honor merit everywhere, in damask or in dust.

We're children of one family, it cannot be denied,
For our father dwelt in Eden—and he was "countrified."

New Bedford Standard.

THE CEDARS.

The question is often asked, what ails the cedars? but none seem to be able, satisfactorily to reply. As early as April they had the appearance that evergreens presented during the severe drought of 1854, the leaves had a reddish-brown look, something as they appear when changing their old foliage for new. Many supposed it to be merely that natural and annual transition. But the season passed when that appearance was natural, and still the cedars have a gloomy and funereal dress, still fading, falling, and leaving bare and disconsolate looking branches.

This condition of the cedars may be noticed

through a wide extent of country; through Connecticut, New York, New Jersey, Delaware, Pennsylvania, Maryland and Massachusetts. We have not been in Maine, New Hampshire or Vermont to notice them there, and are not informed whether

they are affected or not. At this time, many trees seem to be actually dying. What is the cause of it? Is there a widely-spread disease or contagion, as was the case with the buttonwood trees, or is it the effect of winter, frost, heat or moisture?



PLAN FOR A DOUBLE COTTAGE.

Among the various plans of buildings which we have from time to time presented, there has been none, we believe, for a double dwelling. In GERVASE WHEELER'S *"Homes for the People,"* we find the following illustration and descriptions, and give them, in the hope that our readers will find just what they want.

A small home for the laboring man in the country, or the mechanic in the suburb of a city, is much needed. Frequently the inducements of some saving in cost are sufficient to cause the erection of double cottages, each one entirely distinct, but causing a diminished outlay than would be required for the construction of two separate dwellings.

Small houses so contrived are in increasing demand. The following design illustrates a convenient plan by which two separate dwellings are comprised under one roof.

The plan represents a parallelogram consisting

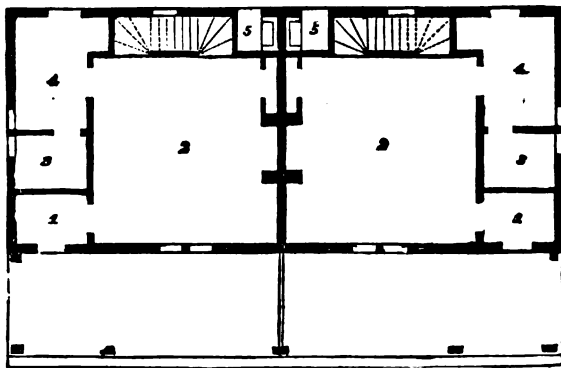
of a double square, each half of which is twenty-two feet, forming in all a building forty-four feet by twenty-two, inside dimensions in the clear. The chimney for each half is in the party wall between, and the entrances are at the farthest corner of each front.

Each dwelling is arranged as follows:—

On the outer corner is an entry, No. 1, containing the front door, and fitted with hooks and other conveniences for out-door garments; in this is space for a wash-stand for the use of the men of the family, when returning home for their meals.

No. 2 is a large family living room, sixteen feet square, having a fireplace and a large closet by its side for earthen-ware. From this room an inclosed flight of stairs leads to the cellar and to the rooms upon the floor above.

By the side of the kitchen is a large inner closet, No. 3, lighted by a window at the side, and opening from a sink-room and scullery, No. 4, which contains an outer door, and in the recess by it a sink. Under the staircase window is a covered shoot to the cellar. Entered from outside the building is a necessary, No. 5, so arranged as to come next that of the other dwelling, and thus constructed over but one vault. The walls surrounding this are of brick, cemented; and although under the same roof as the rest of the house, the position of this appendage is in no way a source of discomfort. From it, just below the seat, a flue is formed in the party wall, discharging into the smoke-flues from the fireplace in the living room, by which means all impure air is drawn off and discharged above the building. If wished, the partition wall, between 3 and 4, could be extended into the latter, and the increased space given to the



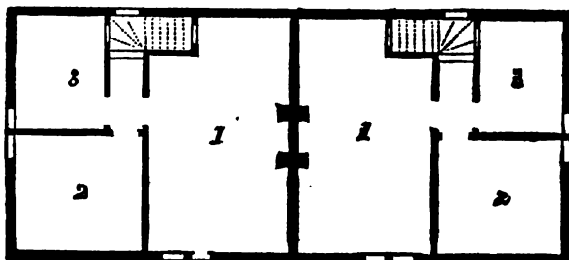
DOUBLE COTTAGE—PLAN OF GROUND FLOOR.

former, would make it sufficient for a sleeping room for a man or boy.

These plans are drawn, as before remarked, to an enlarged scale. The height of this story, in the clear, is eight feet six inches, and the walls are thirteen feet from the underpinning to the underside of the plate, by which the chambers are made airy, and each room of proper height upon the walls.

The space upon the second floor is used in the most economical manner, as the plan testifies.

The staircase leads to a small hall, from which doors conduct to a large chamber, No. 1, in one end of which is a recess for the bed, leaving space in the remainder of the chamber for a second bed, if the number in the family required. No. 2 is the



CHAMBER FLOOR.

second chamber, and No. 3, adjoining it, is of diminished size. Above the doors of each room, are apertures for the circulation of air, and in the skirting-board of each, opening on the well of the staircase, or the upper hall, are left registers for the admission of a current of air above the floor. A large window is provided upon the stairs, which should drop at the top as well as bottom sash, and, when open, would from its position fully ventilate the air in the upper floor of the building; inner windows are also provided in rooms 1 and 2, opening to the well of the stairway.

Space would not permit the provision of closets, which, unless properly aired and attended to, are nests for vermin in such small dwellings. If needed, however, the recess at the end of room No. 1, could be inclosed so as to form a large store closet, and having a swing window inserted therein towards the well of the stairs, could easily be kept sweet. These simple arrangements for securing a circulation of air in the sleeping rooms, would render them healthful and pleasant, and should, on no account, be lost sight of in the erection of the building.

The outside finish of the cottage is so simple as to render remark unnecessary. The walls, being unbroken by any projections, can be constructed of concrete, adobe, or any other material that local circumstances render most economical and desirable.

The chimney shafts are of brick, built so that

the flues are set diagonally to the base, by which means increased beauty of effect is gained and the current of air is broken.

The verandah is cheaply formed, and the roofs are finished merely by the extension of the timbers beyond the outer face of the walls.

The cost of this double dwelling would not exceed one thousand dollars, and under favorable circumstances could be erected for less.

For the New England Farmer.

MY GARDEN.

Its Weeds—Its Insects—Its Birds—Its Injury by the last Winter—An experiment of the fall planting of Potato a failure, and why—Office of the Seed Potato.

1. *Weeds.* The worst kinds to exterminate, I have been taught to call chickweed and quack grass. Perhaps others call the latter witch grass. The chickweed spreads over the ground, in small vines, with small leaves, rooting itself as it extends in every direction. It is perennial, having great vitality and fecundity. It blows and seeds early and late, till frost binds the ground, and no cold ever kills it. Any minute part left in the ground propagates itself, and let alone claims the whole of it. Drought is no terror to it. It will live forever when it has fairly taken possession, as in the shade of trees, or in any plot not cultivated. Quack grass sends forth trails of roots near the surface, and sends up a constant thick set of spires to usurp the soil. The propagating power of this grass is remarkable, and it is a sore annoyance to the gardener. Summer weeds propagated only by seed are easily subdued, but I would fain learn how to kill all seeds in vegetable compost.

2. *Insects.* The curculio is very destructive this season. The black flea begins his work early upon cabbages and cauliflowers, and kills the young plants and stunts them when transplanted. He riddles with his punctures leaves of potatoes till they blossom, perhaps later. The cutworm fells young cabbages, onions and even potato stalks, as well as beets, and depredates through May and June. The yellow bug and his offspring are very mischievous. For want of cucumbers and melons perhaps, he attacks, on my premises, the potato vines, and fares sumptuously till the present time, July 9th. Very voracious and prolific, this insect breeds a multitudinous succession of broods of slugs, which consume as they go the leaves, leaving but the coarse fibres often, and thus preventing the healthy development of the plant. Its blows are almost uniformly prevented from expanding in my garden, and of course few seed balls are formed. The stalks grow sickly in consequence, and though new ones start from the bottom, they cannot retrieve the damage of the parent stalk, nor do their office in their late growth of aiding in the formation and growth of the tubers. I wonder not that they have consumption and droopy, for these and other insects, in my experience, *fatally prevent the development and proper functions of the essential part of the plant that expands in the air.* The stalk-borer does a share of the same mischief, entering and drilling and killing the stalks he attacks. He is a fellow of black and white stripes, of length and size according to his age, ever found in the centre of each stalk that wilts.

3. *Birds.* The robin, oriole, chipping bird and yellow bird are kind in destroying many slugs and other accessible insects, but they soon get cloyed and desist.

4. *The past Winter.* It killed my peach trees many extreme branches of the cherry of last years' growth, and greatly injured plum trees, and the Isabella grape.

5. I planted a row of potatoes in November,

deeper than is usual in the spring. Those left in the ground accidentally at digging, have come up well, been healthy, and not known to rot. But I planted *too late*, and the potatoes were found rotted in the spring. If potatoes accidentally left in the ground survive the winter, grow early and appear more vigorous than the spring planted, I ask why cannot we *plant* potatoes in the fall and have them do as well? Let the potato be repositied in the ground with but short exposure to the air.

6. The office of a seed potato is to furnish the germs whence proceed the stalks or vines, and also two sets of roots, sap roots and tuber-bearing roots. Any farmer, by raising carefully all that has grown from a planted tuber from its position will see this. Only a part of the eyes have grown, sometimes three, sometimes more, the others being inert. In the most productive hills only the skin of the parent tuber remains, its substance being used up. It has gone to feed the whole plant. A large potato thus used up, must furnish more food than a small one. A potato found under a bin in my cellar in the fall, sent out stems with little potatoes like peas upon them, and also fibre roots from the same eye. The tuber was exhausted and dry, by the process.

J. LEE.

Salisbury, Conn., June 9, 1856.

For the New England Farmer.

FANCY FARMING.

BY HENRY F. FRENCH.

Hay Caps—Mowing Machines—Root Crops—Wheel Hoes—The Double Plow—Boxes and Bugs.

"Do you think all these fancy contrivances in farming will pay?" was the sensible question bluntly propounded to me a day or two since, by rather an old-fashioned farmer, who had occasion to pass my land often, and is a keen observer of men and things, with a careful eye to the main chance.

He was looking at the time at my hay in cock covered with hay caps, with a glance now and then at a wheel-hoe, with which at the time I was weeding a carrot bed. "If they don't pay me, they may perhaps pay some of you more cautious people, who take the benefit of my experiments, without bearing the loss of their failure," was my reply. The fact is, I was obliged to be a little more meek than accords with my general disposition, because I was conscious that my neighbor had noticed one or two awful failures, not to say blunders, of mine in the farming line, and it would not answer for me to set up for infallibility before him. One can pretend to know everything in his newspaper articles, but one's neighbors usually discount a trifle from his omniscience.

We had a good agricultural talk, and if he did not learn much, I did, and have been meditating a good deal on "these fancy contrivances" since; and now, when the rain is pouring like a flood again, on those same hay-caps, on another lot of hay, let us pursue the subject with the readers of the *Farmer*.

HAY CAPS.

Hay caps *do* pay, and no mistake. Take four yards of yard-wide cotton sheeting,—sew it together so as to make two yards square, hem the rough edges, turn up each corner two or three inches and sew it strongly, tie in a short strong twine to form a loop, and you have a hay cap ready for use.

Four sharp wooden pins, of hard wood, half an inch in diameter, eighteen inches long, to be thrust upward through the loops into the hay at the bottom of the cock, complete the preparation.

This is our way of doing it in this neighborhood, and we are all satisfied with it. The cost of the cloth is eight cents per yard, and the making you can calculate better than I, if you make them by hand. Mine were made on a Wheeler & Wilson sewing-machine, which sews a yard in a minute, one of the "fancy contrivances" which, by the way, is a great comfort to my family. "Well, how do the hay caps work?" is the question on all sides. "Why don't they wet through, just as your cotton shirt does on your back?" The reason is, my friend, because they shed rain just as your cotton umbrella does. Or to be more precise, the principle of cohesive attraction at once unites two drops of water that touch each other into one, and the same principle conducts the water along the wet cloth to its lower edge. If the hay were very fine and very green so that the cloth would touch it at all points, it would doubtless take off much of the water, but coarse or partly dried hay is in contact with the cloth, only at comparatively few points, and so the cloth conducts the water away, like the covering of a tent. Coarse clover will remain safe through a week's rain with such protection, while I have had fine hay which was cocked up green, injured by *heating*, not by water, in three days. On the whole, a farmer of moderate means, who cuts much coarse hay, cannot afford to be without some thirty or forty hay caps. He will save their value in one such season as this, or that of last year.

MOWING MACHINES.

In 1853, near Albany, I witnessed a trial exhibition of two mowing machines, Ketchum's and Emery's, each of which did its work handsomely, and at the rate of about an acre in an hour. Since then I have seen several trials, but not one that was satisfactory. Several tried in this county last year, failed entirely. A good mower with the common scythe, can cut an acre of grass in four hours, and if a span of good horses, a skilful driver and a machine worth a hundred dollars or more, and liable to expensive accidents, can do no more than four times as much, there is no great saving of cost on small farms. We usually mow our grass in the morning, let it stand in cock through one night, open it the next day, say at ten o'clock, and get it in in the afternoon, and on this system, the men can cut as much each morning by ten o'clock, as

they can attend to through the day. Of course, we use a horse-rake (the Independent,) with which one man and horse can do the labor of eight or ten men with hand rakes. Any farmer who cuts ten tons of hay, and does not use a horse-rake, is behind the age, and a fit subject for missionary enterprise. Horse-rakes are among the essentials of respectable farmers, and not to be named among doubtful implements.

Let us hear the reports of this year's experiments with mowing machines, and perhaps a different account may be rendered in future. What we want in New Hampshire is a light one-horse machine, and no doubt we shall see it in general use before many years.

ROOT CROPS—SOWING MACHINES—WHEEL HOES.

I shall leave it to the principal editor to advocate the cultivation of root crops, merely saying at present, that as usual, he is in the right, and that the farmers will see, by-and-by, the benefit of this branch of husbandry, especially of the culture of carrots and turnips.

If the land is well prepared, rich and clean, and the proper tools used, a crop of carrots is one of our cheapest crops. I sow them with a machine, about sixteen inches apart, between the rows, about the first of June. As soon as the weeds appear, I run the WHEEL HOE between the rows. This may be done even before the carrots are up, if necessary, as the mark of the drill is plainly visible, and I never use a common hoe at all about the crop. The wheel hoe, I think, was invented at Danvers, where they raise onions, and it is the very best hand machine of its cost, on the farm. They are sold for about a dollar and a half. I think a crop of carrots or onions may be raised with *one-half* the labor, by the use of this machine, that is required without it. Mr. Jona. A. Robinson, of Fremont, N. H., has taken a patent upon a Hand Cultivator, which I have never used, but which is claimed to be an improvement upon the wheel hoe, because it cuts up the weeds on both sides of the row at once.

I intend, this year, to repeat the experiment which I have often tried successfully, of plowing up some of my worn-out grass land, after haying, and re-seeding with grass seed and turnips. I have raised several fine crops in this way, sowing about one pound of turnip seed to the acre, at any time before the 10th of August, broadcast with the grass seed. The prospect now is, that the present will be a favorable season for such a crop. Try it, farmers, as the last chance to make up for want of putting in seed enough last spring. Ashes and superphosphate of lime, in addition to all the barn manure you can spare, are first rate food for the turnip crop.

And in connection with this subject, it may be well to say a word by way of reminder, if one may

borrow a word from the ministers, which is not even in Webster, of

THE DOUBLE PLOW.

This is classed by many as a "new contrivance," but it is figured in the English books of a half century ago, though perhaps, not then used except for opening drains, or the like. For turning over sod, to be immediately sowed again with grass seed where the land is tolerably smooth, there is nothing equal to the double plow. Apply all your manure in fine compost to the furrow, and harrow it in. The deeper you plow the better, provided you have manure enough to enrich the stratum of soil brought to the surface. A good deep plowing of sward land, with the double plow, will do more to kill witch grass than any other operation. Where I plowed last year, at Chester, on a piece of hard land swarded with this grass, we found, on cross plowing this year, that a large proportion of the roots had been smothered to death. Naturally the roots of this grass run near the surface, not usually more than four inches deep, and trenching them in, notwithstanding the stories about their vitality, is sure death to them. By common plowing, they are cut in pieces, and thus multiplied, and worked deeper into the soil than they would naturally strike.

If some of the Bay State farmers will plow an old sward of witch grass a foot deep, with the double plow, next May, harrow it, roll it with a heavy roller and plant it immediately, I have no doubt they will confirm this my apparent heresy, about this plant, which is at once, one of our best grasses, and most troublesome weeds.

BOXES VERSUS BUGS.

I cover my cucumber and squash plants with boxes covered with gauze, which I find effectual to keep off the striped bugs. The *Maine Farmer* declares that the gauze is a work of supererogation, and that a fence made of cloth or wood, six inches high, round each hill, is just as good without a covering. I know of no better authority than the *Maine Farmer*, and as soon as I read the article, I took off the gauze from several boxes, with a view to test the matter, but have not yet become satisfied whether our friend is correct or not, or whether his theory, as to how that kind of bugs fly, will answer without a slight variation, for this latitude. So far as I could observe, I was inclined to the opinion, that our bugs *had not read the Maine Farmer!*

Exeter, July 12, 1856.

A SHOERING STOOL FOR BLACKSMITHS.—The following is a description of a stool for blacksmiths for shoeing horses, which I have invented and found to be very convenient and useful, and I present it for the benefit of the craft.

I make a light, portable stool, of the form of a common crutch, with one leg, and put a cushion

on the seat. To this is secured a strap, which passes around above the hips, and is buckled tight in front. The seat of the stool is about four inches thick, and is held to its place in the leg by an iron spur. The blacksmith puts it on behind and between his thighs and buckles it in front, and the horse's foot is placed on the seat; it thus supports the weight of the animal's leg, and relieves the back of the shoer from that severe strain which makes horse-shoeing such hard work.—*Scientific American*.

For the New England Farmer.

SCENERY AND POTATOES IN NOVA SCOTIA.

A few remarks on potato culture may not be without interest from a Vermont farmer, who in his travels "away down East" finds himself in Acadia, the land of the potato. When the English took the country from the French, the name was changed to Nova Scotia, or New Scotland. In the distance may be seen the village where lived "Benedict Bellefontaine, the wealthiest farmer of Grand Pre, and Evangeline, his daughter," also, "Gabriel the faithful, and his father, Basil the blacksmith;" the basin of Minos washing its shores, and Blomidon cape rising aloft in the distance, looking quietly down upon one of the most beautiful scenes imaginable. Its summit affords the finest water and landscape that I ever looked upon. The valley of Cornwallis and Hooton is about two miles wide, on each side of which rides a ridge of land, called here, the North and South mountain, running parallel to each other, extending from Cape Blomidon to Digby—just one hundred miles. The shores of this valley, at the eastern part of Cornwallis, is washed by Minos Basin; and formerly, the tide, which rises here *sixty feet*, flowed up numerous rivers, running into the country many miles, overflowing large tracts of land at every flood, and depositing a rich alluvial soil. The old French Acadians, between one and two hundred years ago, built aboteauls or dykes across the rivers, excluding the tide, and making the richest grass land in the world; which now, after a century has passed away, without ever having received a particle of manure of any kind, yields a burden of hay, the amount of which, per acre, exceeds anything that a Vermont farmer ever dreamed of. The statement made by persons who are perfectly reliable is this; that many portions of this dyke land yield at one mowing, *four* and sometimes *five* tons per acre of the best hay, and that too, when well made, and after it has been kept in a barn until winter. The same land yields four hundred bushels of potatoes per acre.

The farms on the upland are generally superior. Very seldom will one be found having less than ten acres under cultivation with potatoes; and our farm has now sixty acres planted with the favorite esculent. The method of culture is quite different from what is practised in Vermont. One eye to the hill is all that is used, the hills being two feet apart each way. The number of bushels required to plant an acre is four, and the average yield two hundred bushels per acre. Large potatoes are preferred for seed. Indeed, few small potatoes are raised in Cornwallis. Small potatoes, when raised on poor land and well ripened, yield a large crop when planted on good land; but the small ones

raised on rich land are generally what is called the second settings, and probably do not fully ripen, and are not considered good seed. One of the best farmers in the country, John T. Newcomb, has informed me that a few years ago, in a time of scarcity, he planted an acre of land with one and a half bushels of small potatoes, putting one eye to a hill, the piece of potato with the eye often being no larger than a pea; from that acre of land he received over five hundred bushels of very large potatoes.

Wheat is raised here, though not largely. They do not sow it until June, usually about the 10th.—One farmer sowed a piece of land to wheat the 29th of June, and received a good yield. Wheat that is sowed in April and May is taken by the weevil.

The business of the country has received a wonderful impetus from the high price which potatoes have demanded for the last few years. The price of real estate has advanced one hundred per cent. More of what is termed Yankee enterprise has been manifested. The schools are becoming superior to their former estate; and church spires are more frequently seen pointing toward heaven, the desired goal of all humanity.

The pending difficulty between the two countries is now a matter of great interest to the good people of the province. They feel much concern for the poor Yankees, and compassionate their condition, in case a war should take place. You cannot convince them but that Great Britain is almighty to destroy every seaboard town and city on the Atlantic shores in an inconceivably short space of time, and would carry devastation and death inland. This, in their loving kindness, they would regret,—*for it would destroy the market for their potatoes.*

P. PINEA.

Cornwallis, Nova Scotia, July 14, 1856.

THE SEASON.

Crops of all kinds, and in all sections of our widely-extended country, so far as we can learn from our own observations, and from our numerous exchanges, are abundant, well-ripened, so far as they have been cut, and generally the weather has been such as to enable the farmer to secure them in good condition. The hay crop is a heavy one; wheat looks finely; rye is good; so are oats. Corn is rather backward, but of fine strength and color, and the recent extremely hot days are bringing it forward rapidly. No complaint is yet made of rot in the potatoes, and the vines are now looking well and promise a plentiful crop. Apple trees gave a fair blossom, but through the activity of the curculio, or some other cause, the young fruit has dropt from the tree in large quantities, so that the prospect now is that the apple crop in the eastern part of the New England States will be a light one. Squash, cucumber and melon vines are generally small and look tired, or, as though they had just got up and had not decided whether they will grow or not. Beans look well.

In some of the western States it has been a little too dry, but no general complaint is made. In-

deed, it will be somewhat difficult for them there to procure help to secure the rich harvests of the season.

Upon the whole, the world is beautiful and prosperous to most of us, and famine, in our extended country and diversified climate, will perhaps never visit our people. All we want to make us the happiest and thriftiest people on earth, is moderate desires, virtuous lives, and a firm, steady and consistent representative government—a government yielding to all their just rights, and encroaching upon none.

For the New England Farmer.

DEEP PLOWING.

MR. BROWN:—As much has been said upon the subject of deep plowing, perhaps it may be thought superfluous to add anything farther on that subject. Yet, as plowing lies at the foundation of our agricultural pursuits, permit me to give the readers of your valuable journal the result of my own observation and experience upon a small scale. It has been the prevailing opinion among our agriculturists, who own land on the interval bordering on the Connecticut river, that it would not do to plow so deep as to disturb the subsoil, consequently, most of our land has ever been plowed shallow, not more than five inches. Their opinion has been strengthened by an experiment made some years ago. A gentleman from Boston came to reside here, and purchased a valuable tract of land in the meadow. With a heavy team and large plow, which he ordered to be put in up to the beam, he turned up so much of the subsoil, and putting on no manure, that the effect was as might have been expected, it killed the land, at least for a number of years. Whence I concluded, as other farmers did, that it would "kill the land" to plow deep, but being assured by Mr. Holbrook, in some of his judicious remarks published in the *Farmer*, that it would not "kill the land," I was persuaded to try an experiment, cautiously beginning with one acre, which I ordered to be plowed two inches deeper every time of plowing, until it obtained the depth of ten inches. It had not, until then, been plowed more than four or five inches; but after the first year, I was satisfied it was not "killing the land," and had two acres more plowed in the same way. The result will show whether the land is killed or not. Two years ago, the three acres produced 113 bushels of rye, 37½ to the acre; last year from the same ground I raised 67 bushels of shelled corn to the acre, weighing 57 lbs. to the bushel. Thus far, I am satisfied with the experiment. But I ought to say that I do not attribute the unusually large crop wholly to deeper plowing, as there may be other causes to come in for a share.

The same ground on which the corn was grown last year, was sowed to rye after harvesting the corn last fall, and it promises to be a fair crop, but not near as heavy as the one two years ago.

The manner in which I cultivate my land is simply this: when it is planted we use about ten loads of long manure to the acre, which is plowed under; after harvest, the same ground is sowed to rye, without any manure.

E. C.

Northampton, June, 1856.

THE FARMER.

The farmer is a happy man,
He raises all he needs, sir,
The foremost stands of all the van,
All occupations leads, sir.

His cattle furnish beef enough,
His sheep, a heap of wool, sir,
His children hearty are and tough,
His coffers always full, sir.

His barns are large and all well filled
With hay, and corn, and rye, sir,
His orchards rich, his land well tilled,
Both fruit and food supply, sir.

His cellar in the autumn shows,
Of roots, a bounteous store, sir,
He's well prepared for winter snows,—
What could a man want more, sir?

His horses kept in first rate trim,
For wagon, chaise, or sleigh, sir,
Are ready, now, to carry him,
At any time of day, sir.

His cows are many, and the best
The country can afford, sir,
His butter, cheese and milk attest,
His barns have been well stored, sir.

His pigs are of the Suffolk sort,
You never hear them squeal, sir,
Because they never are kept short,
But filled with corn and meal, sir.

His hens are not of Shanghai sort,
He chooses not by size, sir,
An egg's an egg, and when 'tis bought,
As large a coin supplies, sir.

His turkeys and his geese are fine,
Of both he has a store, sir,
In fact, the farmer has a mine
Richer than golden ore, sir.

His very bees are "busy," too,
And fill his hives with comb, sir,
They have as much as they can do,
To bring his honey home, sir.

Who would not choose the farmer's lot?
What though he has to work, sir?
Much happiness by toll is got,
But who would like a *shirk*, sir?

There's land enough for all young men,
Our country is a great one,
Just pull up stakes and hasten then,
Where fortunes rich await one.

Drew's Rural Intelligencer

SCOTT'S STRAWBERRY PATCH.—We had the pleasure, a few days ago, to visit the strawberry grounds of Mr. J. C. SCOTT, of Brighton, and look at, and test the varieties growing in his collection. There were about seven acres under cultivation, and had yielded then, two days in succession, *four hundred boxes* each day. These were principally the *Brighton Pine* and *Scott's Seedling*; the latter a large, sugar-loaf shaped variety, very sweet and high-flavored. We may give at a future time an engraving of one of these varieties.

During the last seven years *fourteen hundred murders*, it is said, have been perpetrated in and about San Francisco, and the city itself has been burned down *seven times*.

EXTRACTS AND REPLIES.

SALT ON PLUM TREES.

MR. EDITOR:—In June 7th, of the *N. E. Farmer*, "Norfolk" recommends sifting fine salt liberally on plum trees. I would inquire of your readers who have tried it, if they have seen any bad effects from salting plum trees. I have a fine tree in my yard, bearing plums for the first time, and was anxious to have the fruit mature, so I sifted salt on the top, which killed the leaves where it remained and dissolved, and the tree now looks like one scorched with fire.

I would say to "J. T. W.," of Marlboro', that I have a plum scion set one year ago last spring, that is 4½ in. in circumference at the but, 5 ft. 5 in. high, had 8 limbs Saturday, that measured

No. 1.....	2 ft. 1 in.
No. 2.....	1 ft. 10 in.
No. 3.....	1 ft. 9 in.
No. 4.....	1 ft. 11 in.
No. 5.....	1 ft. 9 in.
No. 6.....	2 ft. 4½ in.
No. 7.....	0 ft. 11 in.
No. 8.....	1 ft. 4 in.

I cut one foot off the top, and 12 side sprouts, last spring.

Nashua, N. H., July, 1856.

REMARKS.—You are not the only one who has destroyed the foliage of plum trees by the too free use of salt. As is necessary, in most other experiments on the farm, the salt should be used sparingly, until its effect can be ascertained.

A PROFITABLE COW.

Mr. David Heath, of North Troy, Vt., week before last made from the milk of one cow of Durham breed, fifteen pounds of butter. This we deem extra for a cow that has had nothing but common pasturage. From the first three days' milking, he made seven pounds and ten ounces, this being about eighteen pounds per week. The cow probably would have made that had not a part of the milk been taken for family use.

O. N. ELKINS.

North Troy, Vt., June 26th, 1856.

BLOSSOMS, BUT DOES NOT BEAR!

I have a standard Duchess d'Angouleme pear, which blossoms every spring but matures no fruit. I have seen a remedy somewhere, but cannot now call to mind where I saw it, or what the operation was. Who can inform me?

Swampscott, 1856.

S. T., JR.

CROPS IN VERMONT.

The weather is extremely warm; grass and grain crops look well; fruit trees did not blossom much, many trees are dead, and I think owing to the great growth they got last season, and the severe winter. We had more meadow moles this spring than ever known here before, who ate grass roots and young trees very much last winter. All stock is high; wool is selling from 40 to 50 cents per pound. I think there are many thousand sheep less than there has been any year for the last 20 years in this country.

W. T. GOODRICH.

Middlebury, Vt., June, 1856.

A GOOD APPLE.

I send you a few of my *Washington Royal* apples to show you their keeping qualities. They are below an average size, but I think are eatable. They have been kept without any extra care, and have proved themselves a good apple to keep for late as well as early eating. I can furnish scions from bearing trees of this fruit the ensuing spring, to those who may wish to obtain them.

EPHRAIM ROBBINS.

Leominster, July, 1856.

REMARKS.—The apples came in good condition, and were as crisp, juicy and fine-flavored as any we ever tasted in the month of July. Judging from these, we should think them well worth a place in any orchard.

ASHES ON BEET LEAVES.

Your correspondent inquires how to preserve beet leaves from the maggot. My beets have been infested with them this year, and last too; my remedy is to sprinkle wood ashes on the leaves, when the dew is on, and I find it effectual, as in a short time they look as fresh as ever.

Cordaville, 1856.

A SUBSCRIBER.

OCTAGON BARN.

MR. EDITOR:—I notice a correspondent of yours, C. C., suggests that there is much room saved by building an octagon, instead of a square barn. Will he or yourself give me an idea of its internal arrangements?

Respectfully, M.

Highland, Madison Co., N. Y., June, 1856.

FORM OF THE EARTH.—The earth being round like a ball, it follows that at a certain distance, even though our vision can reach much further, its form will prevent us from seeing objects even if its surface were perfectly smooth. It has been calculated that at 600 yards an object one inch high cannot be seen in a straight line; at 900 yards, two inches; at 1400 yards, five inches; at one mile, eight inches; three miles, six feet,—so at that distance a man would be invisible. In leveling, it is usual to allow the tenth of an inch in every two hundred yards, or eight inches in a mile, for convexity.

Scientific American.

BOYS' DEPARTMENT.

A VISIT TO LUTHER'S SCHOOL.

[A correspondent of the *Massachusetts Teacher*, "W. L. G.," gives the following interesting account of a visit to a school in which Martin Luther was once a pupil, in Mansfeld, Germany:]

In the last number of the "Teacher" I gave its readers a translation from the treatise of Madame de Stael, on Germany; I wish in this to describe a visit made to a very remarkable school; remarkable not for its size, not for its liberal endowment, not for the learning of its teachers, but because it was the school which Luther attended. In the public school of Mansfeld he was a pupil from so tender an age, that his father used to bring him in his arms, up to the time when in his fifteenth year

he went to study in the higher school of Magdeburg. Here it was that he received fifteen blows in one day, for Luther was no saint, either as boy or man, and was by no means so fortunate as to escape the rod. A friend in Berlin has told me, however, that in this matter, the translator of Dr. Merle's History of the Reformation has made Luther's master little better than a brute, representing that he gave the child fifteen *floggings* in one day. The reader who has the History at hand, would do well to turn to its pages, and correct the error, for it is hardly creditable to Luther's school-days, that it should stand recorded in a book so well known as Merle's History, that he received fifteen floggings within six hours.

Externally the school-room has the same appearance as when Martin Luther entered its door. Over that stands now a statue in relief of one of the counts of Mansfeld, with these lines written beneath:

Cen Trojanns equus pugnaces ventre cohortes
Edidit, eductus sic schola docta viros.
In plures nobis, Mauroruin Eques, ede Lutheros
Et surgent Christo plura trophæa ducti.

"As the Trojan horse sent out from its belly warlike bands, so a well-taught school sends forth cultivated men. Give more Luthers to us, knight of Mansfeld, and trophies will yet rise to the victorious Christ."

Within, all is changed: the stone pavement whereon his feet trod, alone remains untouched. The walls are white-washed, the upper rooms turned into a dwelling-house for the present teacher; the old seats on which Luther used to sit have been removed and destroyed. On one the name of the Reformer was cut with a knife; that too is gone. When the last, and perhaps the only Americans who have ever been here before, visited the school five years since, the old seats were still to be seen, but since then the teacher who received them in so friendly a manner has died, and the building has been made more conformable to the wants of the present generation.

Still the spirit of Luther dwells in the place: it is called Luther's school; the Reformer's portrait is to be seen in every room, and the thick walls, the windows with their small panes, the low-studded ceiling, all bring those olden times to mind, and one can easily imagine the sickly little boy, the miner's son, on the benches before him.

This is the first school for young children which I have visited in Germany, and a description of its appearance, of the method of teaching, so far as a half day would admit of seeing it, may not be uninteresting to the readers of the "Teacher." My own investigations have therefore been confined to the Re-al schools and the Gymnasiums; and of these I shall speak in future letters.

The Luther School in Mansfeld contains about one hundred scholars. Two classes are taught in the building where the Reformer first received instruction; another, the class for girls, meets under the church, where Luther often preached; and the elementary school, where both sexes are initiated into the mysteries of the German alphabet, is held in a neighboring room. These four classes form one school, and are under the general direction of Mr. Polhmann, the instructor of the highest class. The age of the pupils is the same as in the summer schools with us; and when they have been here grounded in reading, writing, arithmetic, geography, history, and morals, they are sent to the neighbor-

ing town of Eisleben, the birth-place of Luther, to enter the Re-al School, and to advance to the higher stages of instruction.

The instruction given is of the most thorough kind. Everything is systematized after the general custom in Germany, and an hour is given to every class. The teachers enter thoroughly into the spirit of their work, and everything that the stranger notices bears that air of earnestness which is so grateful to see. The order of the school was nearly perfect. During the half day which I spent there, I saw no instance of whispering, nor any breach of good manners. This is the more to be wondered at, when we consider the crowded state of the rooms. The desks are not separate, as with us, and each accommodated about ten pupils. So closely are they placed together, that at the end of the session I noticed that it was impossible for the pupils to rise and walk into the aisle; they were obliged to work their way along in a very primitive manner.

At the entrance of a stranger, the pupils rise together, and give in concert, the common salutation, "Ich empfehle mich," I recommend myself; and as he leaves the room, all rise again and say, "Adieu!" This originally French expression has become thoroughly Germanized, and is daily to be heard in all the streets and in the shops. The school closes in this instance as with us, the teacher addressing himself to those sitting on each bench, but there was this difference: as each scholar left the room he said "Adieu." These were the only things which were novel, and which seem peculiar to the German character.

I had the pleasure of witnessing four school exercises, in writing, map-drawing, reading and analysis. The writing was excellent: such neat pages and carefully written copies I have never seen.—One recognizes here that great feature of the national character, that exact knowledge of the relations of parts and of sounds, which gives them their excellence in drawing and music.

The German children have this advantage in writing; they have two separate hands to learn: the Italian, which we use, and the Deutsch or national hand, well adapted to rapid writing, but stiff and utterly ungainly. It is well known to our readers of the *Teacher* that German books are every year more and more printed in the Roman character. All scientific books are so; railway tickets, cards of admission to lectures, the laws printed by order of government are so, and the people are gradually becoming reconciled to the change. But the old hand-writing is still clung to. I do not think that it will ever be entirely superseded. For stenographic purposes it is admirable. I have often seen students at the University, take down a lecture word for word from the Professor's lips; and a system of handwriting that has this advantage, may well dispense with ornament.

The exercise in analysis which I witnessed was excellent. The terms used in German grammar are much more intelligible to children than those of Latin origin which are employed with us. The substantive or noun, which conveys to our children no idea, because they do not know Latin, is to the German children the "Haupt-wort," the head-word; the conjunction is the Bind-wort, the translation of which is so obvious that I will not write it. What life such a nomenclature gives to this usually unmeaning exercise, can readily be imagined.

Reading, too, was very carefully, and what was better, very well taught. Mr. Gieseman, whose class I had the pleasure of hearing, is the compiler of the text-book in common use, and is himself an excellent reader. The German reading books, as I have noticed, are very different from our own. Instead of being composed mainly of extracts from classic authors, and therefore of a literary character, they are mostly made up of bits of history, natural science, geography, and while they teach the scholar to read things which are within his comprehension, they throw a great deal of light upon his school studies.

I talked with the teachers about the methods of discipline which they employ in the government of the school. They punish with the rod an incorrigible offender, but they use words so long as they are equally effective. The province of the teacher is broader than with us; they have the care of the children both within the school-room and beyond its walls. Farther than this, Mr. Pohlmann told me, that it is his duty, if he sees any boy in the place, whether his scholar or not, engaged in anything which is not correct, to exercise the same vigilance over him as over the children under his instruction. What a field for influence is thus opened to the faithful teacher. In such duties can he realize what a hold he may have upon posterity; onerous as his career may be, he can rely that they will all be recompensed.

W. L. G.

LADIES' DEPARTMENT.

HOTEL LIFE IN NEW YORK.

Many noble natures are ruined by the fashionable follies and vices of American society. The old relations and endearments of home are almost unknown in gay circles; there is no inward life, no retirement, in which the graces of the heart are nurtured. All is life outward, gay, dazzling, aiming at display, asking for admiration. The *Transcript* has some pertinent remarks on the influence of hotel life in New York.

"Take, for instance, a woman brought up in one of our New England or western towns, of good parentage, some culture, and decided attractions; you have the germs of a superior character. Choice society, retirement, a life of tranquil improvement, would develop the bud into a consummate flower. Perhaps such a girl marries a business man, who brings her to a New York hotel of the first class. For the first time she is exposed to an epitome of the great world; daily she is seated beside a foreign adventurer or an old coquette. The rude and the gentle, the pleasure-seeker and the speculator, the politician and the trader, the vulgar and the cultivated—all mingle in the sphere of her daily life. Having no housekeeping to attend to, time hangs heavily on her hands; she loiters in the drawing-room, and chats on the stair-case; she dresses elaborately for strangers' eyes; partly from curiosity, and partly from *ennui*, she meets half-way advances to an acquaintance, and before the winter is over, is on familiar terms with scores of people, of whose antecedents she knows nothing, and whose companionship fritters away her time, and begets a love of admiration, which finally becomes as requisite an excitement as alcohol to the inebriate. This feeling grows less and less fastidious, and exacts

more in quantity than quality; emulation feeds it. To outdo the others of her sex in the house, and collect the largest circle, or retain the greatest beau, is the goal of her ambition. She soon forgets how to blush, and learns to talk loud, loses all charm for the refined and intelligent, and prides herself upon being *fast*. When some country cousin or early friend meets her unexpectedly, it is difficult to believe she is the same person known of yore, so completely is the down rubbed off the peach, so wholly is the original interest of character evaporated. To unsex a sweet and modest girl, there is no quicker process than unmodified hotel life in Gotham. The picture, however, must be seen and studied to be appreciated.

DOMESTIC RECEIPTS.

RASPBERRY JAM.—Pass the raspberries through a fine sieve to extract their seeds, add to them their weight in fine, white sugar, and boil them, and stir them over the fire until you can just see the bottom of the stew-pan.

BLACKBERRY JAM.—Boil the blackberries with half their weight of coarse moist sugar for three quarters of an hour, keeping the mass stirred constantly. A stew-pan is not a necessary vehicle; the commonest tin sauce-pan will answer the purpose equally well. The cheapness of this homely delicacy, besides its sanative properties, renders it peculiarly desirable for scantily furnished tables. If the berries be gathered in wet weather, an hour will not be too long a time to boil them.

GOOSEBERRY JAM.—Pick and clean red gooseberries, thoroughly ripe. Boil them by themselves for twenty minutes, skimming them frequently. Then add brown sugar, in the proportion of one pound of sugar to one pound of fruit. Boil for half an hour after the sugar is in. Skim it, and pour it into earthenware jars. When cold, paper up the jars, and set aside in a dry cool situation. Strawberry, and black currant jams, are made in precisely the manner as the above; but instead of brown use lump sugar.

SELF-SEALING FRUIT CANS.—Take a common fruit jar, with a tin cover, made like a shoe-black box. The jar and the cover will probably cost a dime, and hold a quart. Any of the cements that are used for sealing cans or jars will do for this. Heat your fruit, either in the jars, or in some other vessel, and pour it in the jar, (previously warming them.) Now pour enough cement in the cover to give the bottom and side a tin coat. When the cement becomes slightly stiff, apply the cover over the jar, the jar having been well filled, and turn the jar *upside down*; and here is the invention. As fruit jars have a lip, you now have a little trough to fill with cement, and the work is done. Let your jars get cold *standing on the covers, and put them away in the same position*.

It is the steam escaping in the common way of sealing or soldering cans, that leaves so many of them imperfect. My plan entirely obviates this difficulty, as the steam or vapor is always on top of the fruit. This arrangement, you perceive, is really a chemist's *pneumatic trough*, and there is no danger when your fruit has cooled down and created a vacuum, that the external atmospheric pressure will force the corks in.—*Cor Ohio Cultivator*.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. VIII.

BOSTON, SEPTEMBER, 1856.

NO. 9.

JOEL NOURSE, PROPRIETOR,
OFFICE...QUINCY-HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

SEPTEMBER.



SEPTEMBER is, by many, regarded as the pleasantest month of the year. The scorching heat of summer has given place to the milder sun-rays and gratefully cooling breezes of autumn. After the continuous and exhausting labors of the hay and grain harvests, how grateful is a season of rest! After sweltering and steaming in the murky and enervating atmosphere of dog-days, how invigorating the pure, elastic air of autumn's first month!

Our pleasurable emotions depend mostly, if not wholly, upon contrast. Having felt the pain of hunger, we are prepared to appreciate the pleasure of eating. "Sweet is the pleasure after pain." How sweet to the laboring man is repose, after the toils of the day! and after the severe labors of the season are past, and the more valuable crops are gathered, and scarcely housed, how delightful for the husbandman to contemplate the work of his hands! how natural for him to indulge in honest pride when he reflects that, by the sweat of his own brow he eats his bread,—that he receives the bounties of a kind Providence, direct from the hand of the great giver of all good!

Supposing our readers are in some such happy frame of mind as this, we propose, at the commencement of this new quarter, to take a stroll with them about the farm; making such suggestions by the way, as may be of service to those who desire progress in the great art of husbandry.

Winter wheat should be sown this month, and

the sooner the better. That wheat may be produced in most parts of New England, and made a remunerative crop, needs not further to be argued. The high price of flour for the last two years, if there were no other consideration, should lead those who have suitable ground to make the experiment.

Whether spring or autumn is the best time for sowing wheat, is a mooted question. We are in favor of both. We have good authority for saying, "In the morning sow thy seed, and in the evening withhold not thy hand."

In Maine, New Hampshire and Vermont, we believe most of the wheat is sown in the spring. The reason assigned is, that it is less liable to winter-kill. If the ground is wet and cold, we should prefer not to sow wheat upon it. But, if at all, we should sow in the spring. Otherwise we prefer autumn.

The same preparation which is made for a crop of rye, will ensure at least as good a return in wheat; and, in most cases, as much better as wheat is more valuable than rye. The ground may be prepared as for rye, by fallowing and seeding, early in September. It may be sown after the corn or potatoes, provided they are got off early in October. But we prefer turning under clover, and sowing about the first of September. In all cases, lime should be used freely. Oyster-shell is cheapest, and answers a good purpose. The shells should be ground without burning. By passing through the fire they lose at least one-half their virtue. Animal matter constitutes an essential part of the shell. This is all driven off by the fire. After drying in the sun, there is no difficulty in grinding them without burning. Wood ashes also, and salt, do good.

Much care should be exercised in the selection of seed, to secure the best varieties, and that which is clean. We think it well to soak the seed over night in strong brine, and roll it in plaster, or lime. Let all who can, try the experiment, if it be but half an acre.

Now is the time for budding *peach trees*. Severe winters and the yellows have made terrible havoc with these trees throughout New England. Unless we abandon this delicious fruit entirely, we must set about the growing of trees at once. All who have unbudded seedlings should attend to them now. Every farmer should be able to bud, and graft, and prune trees properly. If the buds are set early, and the ties loosened when it becomes necessary, but not removed, there is less danger from the frosts of winter. Other buds previously set, should now be attended to.

Composting should not be neglected. The barn-yard, the pig-stye, the cesspool, the privy-vault, should now be liberally supplied with earth, muck, weeds, brakes, and whatever, by decomposition, will add to the value of their contents.

Doubts have been expressed by those whose opinions we are wont to regard in other matters, of the value of muck, as a fertilizer. We are among those who have faith in mud,—who would put a muck rake into the hands of every farmer, and who verily believe that much that is valuable, may be raked out of it,—that it has *intrinsic* value, and moreover is highly valuable as an absorbent and retainer of the volatile ingredients of animal and mineral fertilizers.

Nuisances, if there are any upon the farm, should now be removed. Partially decayed stumps should be grubbed up, or burnt out. We would apply the stump-puller and make a clean sweep. In cultivated fields and grass grounds, stumps should no more be tolerated than carious teeth in the mouth. Brakes, decaying logs and brush-wood should be removed from pastures and beside fences, by all who would not keep a nursery of brakes and thistles, and other pestilent weeds.

Bushes and briars which so abound on an unthrifty farm, should now be removed—extirpated. In this matter we go for radiculture.

Autumn is the time for draining. Thousands of acres of the best land in New England are now producing nothing but brakes, lizards, foul grasses and miasma, which need nothing but to be relieved of surplus water. That New England is incapable of sustaining her present population, we cannot admit. Indeed, we believe that her soil, under proper management, would produce enough to support four times her present population. Shall we not do our part towards securing so desirable an object?

HABITS.—Like flakes of snow that fall unperceived upon the earth, the seeming unimportant events of life succeed one another. As the snow gathers together, so are our habits formed. No single flake that is added to the pile produces a sensible change; no single action creates, however it may exhibit, a man's character; but as the tempest hurls the avalanche down the mountains, and over-

whelms the inhabitant and his habitation, so passion, acting upon the elements of mischief, which pernicious habits have brought together by imperceptible accumulation, may overthrow the edifice of truth and virtue.—*Jeremy Bentham*.

For the New England Farmer.

SWEDISH HORSES.

FRIEND BROWN:—Please copy the enclosed paragraph (cut from a paper) which corroborates my statement in relation to hard floors, and is slightly at war with your correspondent at Derby Line:—

"In Sweden the floors of the stables are planked, and the planks are perforated with holes, so that wet will not lodge on them—the bare boards being the only bedding allowed. To this lodging the Swedes attribute the soundness of their horses' feet, as it is quite uncommon to meet with a lame or foundered horse in Sweden which has been so stabled."

This practice, no doubt, begins with the foal. Hence the enduring soundness of the feet. Heretofore we have argued the filthy practice in diseasing the feet.

Nothing more need be said upon this point. It appears neither cushions for the feet nor bedding for the body are used in Sweden, but their horses are made hardy by omitting these kind practices. Is it not a mistaken kindness that we deal so largely with bedding?

A few years since nothing short of a feather bed was tolerated even in mid-summer. Now it is husks, hair, hazle, straw, or the soft side of a pine floor in preference. If you happen to visit a friend to tarry over night, and to take a sweat in advance, just take a peep into the fat, plump feather-bed—or take the reality and plunge in—to dream of warm water rain storms, or of drowning in your own perspiration—and waking unrefreshed, to find yourself an exhausted mass of vitality.

The comparison is not inapt, hard beds for man and hard floors for horses, in either case, to promote health. An elm plank floor or oak is cheaper and better than pine for horse stalls. All dealers and raisers of horses may learn a good lesson from the Swedish paragraph.

H. POOR.

For the New England Farmer.

BARBARISM.

MR. EDITOR:—I have thought it might produce a good moral effect upon the public mind, to collect and publish such instances of barbarism as the following facts exhibit. I have in this communication collected only a very few cases; but I hope it may call out from among your intelligent correspondents, others who may be able to lay before your readers additional cases which may serve as a warning to barbarians, of whom not a few disgrace our land.

Mr. Emerson speaks of a sassafras tree which was "growing in 1842, in West Cambridge, which measured more than three feet through at the base, and rose without a limb, more than thirty feet, with a trunk very straight and slightly diminished, above which it had a somewhat lofty and broad head. It was nearly sixty feet high, and had been long growing by itself. It was felled and its roots dug up, to allow a stone wall to run in a straight line! Such

pieces of barbarism are still but too common. A tree so beautiful and lofty, and of such rare dimensions, such an ornament to a bare hill-side, sacrificed to the straightness of a wall!" Had this tree been sacrificed for the value of its root and bark, to be used in the manufacture of small beer, I should consider the motives that actuated its destroyers as immeasurably superior to those of the leaden-headed men, who set so high a value upon a mathematical line.

I can name another instance that fell under my own observation, in which a noble and valuable tree was sacrificed to Gunter. In the town of Beverly, four years since, there stood, about a quarter of a mile from the E. R. R. station, a Tupelo tree, of large dimensions, about forty feet in height, and probably one of the largest trees of this species in Essex County. As the Tupelo is very slow in its growth, I have no doubt this tree was 200 years old. A new street was laid out through the field where it grew. The street was named Rantoul Street, in honor of the late lamented Robert Rantoul, Jr., who was in his youth an "admirable Critchton," in all intellectual exercises, and in his mature years one of the most gifted orators and statesmen of the age. Had Mr. R. been consulted on the point the tree would have been saved. But the surveyors found that it would come about three feet inside of the road! It was therefore cut down, though it was the only tree that was worth saving that could be found near the street, from one end of it to the other.

The other case was one in which a tree, many years since, was sacrificed to commercial feeling. A gentleman interested in foreign trade was hindered in making observations with his spy-glass from his housetop, by a magnificent elm that stood in Bartlett Street, Beverly, intercepting his prospect of the bay. He prevailed upon the individual in whose land it stood, (an old gentleman well stricken in years) to cut it down. For this service he paid him ten dollars, "the price of blood." Had I been the owner of the tree, I should as soon thought of negotiating for killing one of the old men of my neighborhood. But if I had taken the "pieces of silver" and consented to destroy the tree, after the deed was done, I should feel myself under moral obligations to finish the series of enormities which I had commenced, by hanging myself, like Judas, on the next tree that could be found. PHILO-DENDRON.

A PROFITABLE VINE.—There is in the city of Dayton a grape vine, which is standing beside a well, over which it is trained on an arbor; well trained, no doubt, well trimmed too, and in every way well cared for by its excellent owner, Mr. A. M. Clark.

Besides those used by the family, fifty dollars have been received by the owner this year, from the sale of the surplus produce of this one grape vine, at \$3 per bushel.—*Western Horticultural Review.*

☞ We are informed that the writer of the article in our last, headed, "Agriculture in Massachusetts," taken from the *Boston Journal*, labors under an entire misapprehension of facts in his statements with reference to the farm occupied by Messrs. Davis and Flint. These gentlemen had no intention, in taking the place, of engaging in model experi-

mental farming, but simply of securing a quiet summer residence.

FALL PLOWING.

The advantages of Fall Plowing may be enumerated as follows:

1. In autumn, the team having become inured to work through the summer, is more vigorous and better prepared for labor than in the spring, and other farm work is less pressing in its demands upon the time and attention than in that bustling period. Let all the plowing be done which is possible in the fall, and still the spring work would give abundant employment to the farmer and his teams, in drawing manure, cross-plowing, cultivating, harrowing, &c.

2. In the fall, low, moist lands are generally in better condition for plowing than in spring time. We say generally, for this season low, moist lands are decidedly moist, at present. Still, we cannot hope for any better state very early next year, and if plowed as they should be, wet lands will suffer very little from water through the winter.

3. Stiff, heavy soils, plowed in autumn, undergo, by the action of water and frost, a more thorough disintegration—clays are pulverized and crumbled, and heavy loams and hard pan lands are acted upon in a like manner and with like benefit.

4. Heavy, coarse swards, full of rank weeds and grasses, can be better subdued by plowing in the fall—their roots are more apt to die out, and far less liable to sprout again than when plowed in the spring. The turf is better prepared, by its more advanced state of decay, for the use of the crops which may be sown or planted upon it.

5. Fall plowing disturbs the "winter arrangements" of numerous worms and insects, and must destroy a large number of these pests, and also their eggs and larvæ. This is a minor advantage, but one worthy of consideration, especially on lands infested with the wire-worm.

The principal objections to fall plowing are these:

1. The loss of that fresh friable condition readily permeable to air and moisture, and the consolidation of the soil by long exposure to changing and stormy weather. This, on soils of a light character, is a very serious objection to plowing in autumn.

2. The loss of vegetable matter and the gases of the same while in a state of decay, is another disadvantage. The latter is but a small loss, if the work is done late in the fall, but often, on hill sides, a large part of the soluble and floating organic matter is washed away by the heavy rains of winter and early spring time. The soil is also consolidated by the same influences. Heavy swards thus situated would sustain less injury than light swards or stubble lands.

The advantages and disadvantages of this practice may be appropriately followed by brief directions for performing the work.

1. Do it in the best manner.

2. Throw up low lands in narrow beds and cut cross furrows and drains sufficient to carry off at once all surface water. This will obviate one great objection to fall plowing.

3. Plow deep and narrow furrows—such will best secure the action of the ameliorating influences of frost upon the soil. A rough broken surface is better than a smooth one for this purpose.—*Rural New-Yorker.*

For the New England Farmer.

FERTILIZERS.

MR. EDITOR:—An argument adverse to the use of concentrated fertilizers is often made to this effect, that there is not, as there ought to be, the same production of fruit as stock.

Plants derive their nourishment entirely from the soil, by their roots, until their leaves are sufficiently matured to receive atmospheric nutrition. Consequently if the soil has been very richly prepared, and the stock has largely developed itself, it will require more from the air to complete its growth, blossoms and fruit, than it can take; because the necessary properties that it needs are limited; for this reason, fruit does not arrive at maturity, or if it does, there is not the quantity anticipated.

The question arises, what must, or can be used to give to plants this exterior food, that they may ripen a larger quantity of fruit? It is a slow and dear process to feed each plant with the acid and ammonia that would be necessary, in any concentrated form. Being not so much a chemist as a farmer, I had rather take farming apparatus in my experiments. Therefore, experimenting, I very often loosen, by hoe and cultivator, the soil which surrounds plants, as this favors the admission of air, and the formation of the acid required. Hence plants must advance rapidly when supplied with food below and above ground; until the maturity of the plant, and full formation of the atmospheric organs indicate that acid from the soil is not demanded. At this stage dryness of the soil does not essentially effect the plant, as all farther support is taken from the air.

Pruning is practicable and beneficial, as upon vines, shrubs and trees; also potato vines should have the blossom taken off; and whatever agency throws strength to the advantage of the fruit should be enforced thereto.

I draw from these remarks that something besides the fertilizer is wanted to insure a good crop. I contend for free speech and *free soil* consequently I must *agitate both*, to receive any benefit.

E. J. W.

For the New England Farmer.

THE GIFFORD MORGAN HORSE.

MR. EDITOR:—In the *Farmer* of May 24, a correspondent, "J. W. A.," wishes to know if there is a horse known as the "Gifford Morgan," and if so, by whom owned and where kept. In the *Farmer* of June 27, a correspondent from Ferrisburg, "P. J.," has attempted to give the desired information, but is not probably well informed, as his communication is somewhat erroneous. I am familiarly acquainted with Mr. ZIBA GIFFORD, of Tunbridge, Vt., who resides within two miles of me, and from him I can give you the information wanted, and in doing so it may be necessary to give you the pedigree of the celebrated horse known as the Woodbury Morgan. The Woodbury horse was sired by the original Morgan horse owned by Justin Morgan, and was folded in June, 1816. The dam of the Woodbury horse was an English mare owned by Lyman Wight, of Tunbridge, Vt. The Gifford Morgan was sired by the Woodbury Morgan in 1825, and died in October, 1850, and was 24 years old; he was owned and kept by Ziba Gifford, of Tunbridge, Vt., 16 years, and then sold to a Mr.

Stuart, of Barnard, Vt., and was afterwards owned by F. A. Wier, of Walpole, Vt., where he died.—Major Gifford was the sire of the celebrated horse, known as the Green Mountain Morgan, owned by Mr. Hale, and several other noted stock horses of Vermont. The dam of the Gifford horse was an English bay mare whose sire was a horse known as the Henry Dundas, owned at the time by Oliver H. Brooks, of Bethel, Vt. The above statement of facts was given me by Mr. Gifford, and if you think proper you can use them at your leisure.

ZOPHAR VINTON.

East Bethel, Vt., July 14.

DO GOOD IN YOUR LIFE-TIME.

Some wealthy men are penurious in their charities during life, reserving their property for magnificent schemes of benevolence after death. The history of these posthumous legacies is not very encouraging, and Providence does not set the seal of approval on that covetousness which seeks to win the name and rewards of benevolence. The *Baltimore Sun* gives an instructive account of the McDonough estate:

"A number of papers, relative to the condition of the McDonough estate at New Orleans, have been forwarded to the Mayor and City Council of Baltimore, by Messrs. Emory and Peterkin, which embrace statements of considerable importance. It is stated by gentlemen of the New Orleans City Council that 'the income from the estate is about \$55,000 per annum, and the expense about \$27,000—leaving only \$28,000 of net revenue, which is \$1,000 less than the taxes on the property for the year 1856. So that the net income is insufficient to pay the taxes on it.'

Another said that the McDonough estate was worth now about one-half what it was when McDonough died—\$5,000,000 then, \$2,270,000 now. We have a bequest estimated, and fairly estimated, as worth \$2,271,000. We have it under the control of able and accomplished gentlemen, and what are the fruits of their labors? John McDonough has been gathered to his fathers five long years. In a vain attempt to leave a noble monument of charity, he made a will as wonderful and curious as it is hopelessly impracticable. Over \$250,000 have been spent in litigation; over \$100,000 have been spent in charges and commissions; over \$500,000 have been lost in interest and delays; over \$500,000 have been lost in decay and pillage, and depreciation of the princely domain. And, in short, these five years past have cost the estate one-half its original value. But notwithstanding all this, not one dollar of charity has ever yet been received by this estate, not one poor child has ever yet been educated; not one poor negro has ever yet been sent to Liberia; nor the tears and sorrows of one poor orphan boy ever yet been assuaged. At every point and in every way has the last will and testament of John McDonough been frustrated and thwarted. For the year 1855 the report of the agents and commissioners informs us that the revenues were \$49,000, whilst its expenses were \$29,000. The value of the real estate in the city of New Orleans is \$1,200,000. In the State of Louisiana \$2,270,000. The net revenues of \$19,805 have thus been for 1855 but $\frac{1}{4}$ per cent. of the city property, and but $\frac{1}{4}$ per cent. of the whole estate. The charges of commissions of agents, &c.,

for 1855, were near \$15,000, or one-third of the gross revenues and three-fourths of the net revenues. The estate paid no city tax for 1854, which would have been for Baltimore's half over \$15,000, and for the whole \$30,000—or a sum greater than the whole net revenue. Such are the naked and startling facts displayed by the report. Nor is the end yet; three suits are now pending against the estate, each involving a large sum, and each carrying a new burden of expense."

For the New England Farmer.

LITTLE THINGS.

OR, A WALK IN MY GARDEN....NO. 8.

Ha! ha! ha! There is a Tomato in blossom! How long I have nursed it to secure a feast of tomatoes. The richest, loveliest and healthiest of all the productions of my garden. Then why not laugh, and call out the wife to see it? Much of our pleasure is derived from witnessing the improvements around us. Our eldest daughter grows taller every day, and the heart of the parent is set aglow with the thought that she will soon be a woman. Those tomatoes, too, will soon be ripe, and the ingenuity of the cook will be put to the test in serving them up. Speaking of the tomato, one thing will be noticed by those who have had but little experience in their cultivation, and that is, that when started in the house we should not be in too great a hurry to transplant them. Not till the warm weather in June, will they grow in open air. I would like to know from medical men, whether they have met with cases of our autumnal fevers in persons who have made a daily, or even weekly use of tomatoes. My impression is that such cases are rare. But let us go along and look at those

EARLY FRENCH EMPEROR PEAS,

which I received from the Governor of Maine.—How beautiful and prolific they look. Then there is another nameless kind, which they say is just as good to boil when dry, as when green. Who can give me its name? Then there are the Prince Albert, the Marrow-fat, and several other kinds received from the Patent Office, all doing finely. I have learned a little secret, I believe, in raising peas. Spade up a strip in the fall, and incorporate some manure with the soil, and in the spring, stir the ground lightly with hoe and rake, plant them an inch in depth, and they will come forward earlier and bear the drought better than when planted shallow. The ground will be porous and allow the water to drain from it better than when spaded in the spring. But let us glance at the

ONIONS.

They are doing well. The onion maggot has not disturbed them. A neighbor tells me that no insect will eat tansy, (*Tanacetum vulgare*.) If so, why will not the expressed juice keep off the maggot, and that prince of rascals, the

CURCULIO,

who has taken nearly all my plums this year. I have no confidence in any remedy yet suggested, though it is best to keep experimenting, for I never yet saw so malevolent a looking fellow as this same curculio. I don't think much of the naturalist who should bestow on him so euphonious a name.

I have thought of trimming some of my trees as compactly as possible, and putting round some millinet until they close their career for the season. I notice that they have also bitten the apple.

Belhel, Me., July 5, 1856.

N. T. T.

CURRENT WINE.

The following recipe for making current wine is sent us by one of the best physicians in Middlesex County:

Let the currants be thoroughly ripened before gathering, and squeeze them with the hand in a sieve, to avoid any mixture of seeds and stem with the juice. Strain the juice, and to every quart, add two quarts of water. To every quart of the mixture add one pound of sugar. Put this mixture into a clean keg, of a size adapted to the quantity, in order that by filling the keg the refuse matter of fermentation may be thrown out of the bung.

When all fermentation has ceased, bung the cask, and let it remain in a cool cellar a few weeks, until all sediment has subsided; then draw off the clear liquor into bottles. Very much of the future good character of the wine will depend upon the manner of corking, and as you may not be provided with a machine for the purpose, let me suggest to throw the corks into boiling water, which process will render them very soft in a few minutes, and in this condition they may be driven very tight with great ease.

EXTRACTS AND REPLIES.

BRAKES AND "LIVEFOREVER."

Please communicate through the *Farmer* the best method of killing brakes on land too wet and stony to plow; and also how to destroy liveforever.

Chittenden, Vt.

R. E. B.

REMARKS.—We know of no other method of destroying brakes than that of cutting them in August two or three times and grubbing with the hoe; after this is done fine manure spread on with some grass seed will be well,—for if the grass seed should start, and the brakes were kept down for a while, the grass might eventually get the upper hand and clothe your land with grass instead of brakes. That which is destined to "live forever" we cannot kill, but the attempt may be made on the plant which you call liveforever, the same as on the brakes. The first and essential thing to be done, in such a case as you describe, is *thorough draining*—that will accomplish more towards the destruction of the offensive plants than all cutting and grubbing.—Drain it.

DOUBLE SWARD PLOW.

I would inquire through the columns of the *N. E. Farmer*, if there is such an implement as a *double side-hill plow*, made, used or sold in this part of the country? If so, where can they be obtained?
Sunapee, N. H., June, 1856.

REMARKS.—A double side hill plow is manufactured and sold by Nourse, Mason & Co., Quincy Hall, Boston.

CELERY PLANTS.

Is there any danger of getting too much, or too strong manure, especially liquid, around celery plants after they get fairly to growing? (a.)

Do they require more water than most other plants? (b.)

Do you draw the soil about the stalks until they are nearly grown? (c.)

Why not set the plants upon the top of the ground and then hill up? (d.)

Thorndike, Ms., 1856.

J. B. THOMAS.

REMARKS.—(a.) There is. A liberal, not an excessive, manuring, is all the plant requires. Especially, unfermented, liquid manure should not be freely applied.

(b.) When first transplanted celery requires watering and a soil quite moist; after that, perhaps no more moisture than beets or parsnips.

(c.) For winter use, there is no need of drawing the earth about the plants, until within two or three weeks before frost is expected, say about the first of September, and then do it at once, keeping the leaves carefully gathered up.

(d.) A slight trench of three or four inches we regard as more convenient than a level, or a trench of a spade's depth. Without any trench it is difficult—without removing a large amount of earth—to cover the stems of the plants; and with a deep one the earth is constantly rolling down and obstructing the young plants.

CEDARS AND OTHER EVERGREENS.

In reply to your question "what ails the cedars," I would say, that although not living in a cedar country, I observed a similar appearance with other evergreens, especially the hemlock, quite early in spring. I at first attributed it to the extreme cold of the past winter; but on further investigation I found the windward side of the tree was most discolored, and those trees which are rigid, like the common spruce, and not easily whipped about by the wind, were mostly free from blight.

In this section we had an unusual number of high winds late in winter and early in spring, and the snow was in many places, even at a distance from any trees of this variety, thickly strewn with small hemlock boughs and twigs, and I have come to the conclusion that the destruction of the evergreens is the effect of very severe and long continuous winds, when the leaves and small branches were frozen so as to prevent their natural freedom of motion.

WM. F. BASSETT.

CROPS IN CHESTER CO., PENN.

The harvest is mainly gathered, excepting oats. Grass was light, owing to dry weather. Wheat is an average crop. Corn is backward, partly owing to being late planted and wet spring. Some suppose the cause to spring from sowing corn taken from the bin, that was gathered before it was fairly ripened. Early potatoes here are an entire failure, and if there is not rain soon, the late ones will be cut off. Our pastures and fields are nearly burnt up.

Louisville, Chester Co., Penn., July 19, 1856.

LANGSTROTH'S BEE-HIVE.

The price of these hives varies from \$2 to \$6, according to the manner in which they are made. The \$6 hives are double, but they are not so convenient as the single hive.

Langstroth's book on bees, we believe is for sale at the book-stores in this city; perhaps at the Warehouse of Nourse, Mason & Co.

APPLE TREE BORERS.

MR. BROWN:—Will mulching apple trees increase the working of the borers in them? I had a number of small trees in my garden, around which I put some straw, last spring to the depth of about 4 inches; on taking them up this spring, I found but very few that did not contain borers, and many were entirely destroyed, having the whole centre taken out, and it is very difficult to find them without taking the tree up by its roots. Perhaps you, or some of your correspondents, can tell me of some remedy that will keep them out.

BARREN GRAPE VINES.

I have a grape vine of a productive kind, taken from a productive vine, and grows with other vines that produce well annually, which blossoms full every year, and yet has never born a grape—and also those taken from this by layers are like it. Can any of the readers of your valuable paper tell me the reason, or give a remedy?

Middlebury, Vt.

H. W. SHELDON.

REMARKS.—We are inclined to believe that mulching trees close to the stems is an invitation to the borer; that is, other things being equal, he will take the mulched tree in preference. In mulching it is not necessary to place the material near the stem—it is better to place it over the tender roots farther off. Then in the winter this mulching invites mice, and must be removed.

The grape vine spoken of is undoubtedly what is called a male vine. They are not uncommon—blossoming, giving out a delightful fragrance, and setting the fruit, but never perfecting it.

STRAWBERRIES.

G. P. SANBORN, Esq., of Chelmsford, has picked from sixteen square rods, or one-tenth of an acre of ground, 450 boxes of strawberries, this season, which were sold in this market for 25 cents per box. Being at the rate of 4,500 boxes per acre.

Lowell, July 5, 1856.

A SUBSCRIBER.

MORRILL HORSE.

Is there a horse known as the Morrill Horse; if so, where kept, and what is his pedigree?

Bridgewater, N. H.

J. W. B.

Will L. G. W., of Marlboro', N. H., inform me through the *Farmer* to what variety of plum the scion that grew nearly twenty feet in one season belonged—and into what variety of stock it was grafted?

M. M. J.

For the New England Farmer.

A MACHINE FOR MILKING COWS.

There is no work about a farm that is so universally considered drudgery, and avoided, and dreaded by all the inmates of the farm-house, as the constantly recurring labor of milking. It is always the first thing to be done in the morning, and the last at night. And after a hard day's work at the wash-tub, or in the hay field, through a long, hot day in July or August,—to be obliged to sit down and milk three or four cows, is certainly no very trifling or attractive affair. To be able to perform this work easily and rapidly by machinery is therefore one of the most desirable steps to be made in the process of labor-saving inventions, in agricultural improvement. And when it is considered that in the United States alone, there were in 1850 6,385,000 milch cows, each one to be milked by hand twice every day for about three hundred days in a year; that the amount of the butter and cheese for that year, as shown by the census, was 418,881,000 pounds, in addition to \$7,000,000 worth of milk sold, we get some idea of the magnitude of the labor to be annually performed in milking.

But it is not a difficult matter to perform all this unpleasant drudgery by machinery. The only wonder is that so simple a thing had not been discovered and used years ago. Just look at a calf while he is sucking, and consider how rapidly, easily and perfectly he would perform the operation of drawing milk from the cow's udder, *if he had four mouths instead of one!* And every one will see it is no very difficult affair to construct a machine with four mouths, that will do the same thing in the same way, quite as easily, rapidly and perfectly as the calf could do it! drawing all the milk into a pail or vessel, free from every impurity, and with very little exertion.

Acting on this idea, I have been devoting the leisure moments of some two or three years to experiments, with a view to perfect a machine for milking cows; and I am happy to say that I have succeeded beyond my most sanguine expectations. My application for a patent is now under examination in the Patent Office, and the machine will soon be presented to the public.

It is somewhat difficult to describe even the most simple piece of mechanism, without diagrams or illustrations, so as to make one's self understood; but this little machine is so simple, and its action so easily comprehended, that I will venture to describe it without cuts or figures.

In the first place, I take a large size pail, either of tin or wood, and fit on it a cover so as to make it air tight; then I construct a small pump in some compact form, so as to exhaust a part of the air from the pail. The pump made for my experiments (and which is described in the application for a patent) is a part of the cover to the pail, and being flat and thin, works rapidly and without friction, and does not wear so as to leak. It is only necessary to produce a slight vacuum, such as a calf might make with his mouth—I then connect four small rubber tubes, about eighteen inches long, with the top of the pail; and on the other end of each of these tubes, I fix a little cup of tin, glass, or any other convenient material, about two inches in diameter and three inches deep. Over the top of each of these cups is drawn a cap of thin, flexible rubber, having a sack or mouth in the centre, of sufficient size to receive the end of the cow's

teat, with a small hole in the bottom for the milk to pass through. The cap fits to the top of the cup, air tight, by its own contraction, and also hangs around the end of the teat, but by its flexibility permits a free flow of the milk into the cup and through the rubber tube into the pail.

Having got the machine in readiness, I slip each of the cow's teats into one of the soft, flexible sacks or mouths, which can be done in an instant with the end of the thumb—the rubber clings around the teats and holds the cups in place. I then commence pumping slowly and easily, and the milk flows in a large, steady stream from each teat, through the tubes into the pail. The cow, meanwhile, is quietly chewing her cud, hardly knowing that anything is going on; so perfectly is the teat sustained by the rubber sack, that the suction hardly affects it at all, and there is no pulling, or finching, or squeezing in any direction. All the while the milk is flowing at the rate of about two quarts per minute; at any rate, I have milked eight quarts of milk from my cow in four minutes, with a machine by no means perfect; because being the first and only one ever made, and got up only to experiment with, it has suggested improvements which will be embodied hereafter; I am entirely satisfied that a child or a woman can milk with this machine with perfect ease, faster than four milkers either men or women, can milk by hand.

But the chiefest recommendation of the machine still remains to be mentioned. The common method of milking by hand necessarily exposes the milk to more or less dust, dripping from the hands, and other kinds of filth, which often spoils its taste, and always gives one the idea that he is swallowing a disagreeable amount of unmentionable materials. Even the best and most careful milkers cannot avoid getting something into the pail that should not go there; this is proved by the universal custom of the straining milk immediately after milking, in all cases, and by whomsoever it may have been milked. But straining will not take out the drippings from the hands of careless, filthy milkers; and the result is, a very general complaint among consumers, of the bad taste of milk, too often attributed to the adulteration or dishonesty of milkmen.

This machine, however, entirely obviates this unpleasant difficulty. The milk is drawn directly from the udder into a covered, air tight pail, where no dust or drippings or filth can fall of itself, or be thrown by carelessness. The Irish girls cannot dip their hands into the pail to moisten the teats, as is their common practice, nor can the cow step into the pail, or kick it over, so as to spill the milk.

In short, I think the *milking machine* will be a great labor-saving improvement for the agricultural community, and a genuine comfort to both the cows and the consumers. Immediate efforts will be made, after obtaining a patent, to introduce the machine to the notice of the public, and to supply the market demand for them. It is not possible at present to say at what price they can be afforded, but probably they will not cost far from five dollars apiece.

JOHN W. KINGSMAN.

Dover, N. H., July 21, 1856.

ORDER!—Never leave things lying about—a shawl here, a pair of slippers there, and a bonnet somewhere else—trusting to a servant to set things

to rights. No matter how many servants you have, it is a miserable habit, and if its source is not in the intellectual and moral character, it will inevitably terminate there. If you have used the dipper, towel, tumbler, &c., put them back in their places, and you will know where to find them when you want them again. Or if you set an example of carelessness, do not blame your servants for following it. Children should be taught to put things back in their places as soon as they are old enough to use them; and if each member of the family were to observe this simple rule, the house would never get much out of order, and a large amount of vexation and useless labor would be avoided.

AGRICULTURE IN MASSACHUSETTS.

TO THE EDITOR OF THE BOSTON JOURNAL:—In your paper of the 2d, you give a somewhat elaborate report of the proceedings of the Board of Agriculture at Westboro', and comment at some length upon the benefit to agriculture of the experiments and inquiries instituted upon that noble farm.

Nothing is more gratifying to the lover of his country's welfare than thus to see a leading journal giving its time, and room in its columns, to the furtherance of agriculture among us, an art which does not usually rise above the notice of the few who happen to be interested, in other parts of the world.

Every improvement in agriculture that tends to increase the amount of gross returns from the earth's culture, per annum, or that reduces the cost of cultivation or harvest, is of more real importance to the world than any other invention, discovery or improvement to the same amount that is ever made.

Whilst many of our enthusiastic countrymen have been for years devoting their time and money to this cause, others have held back and sneered at all prospect of valuable returns in such a cause.—The strongest opposition has always been met among those who ought to be the warmest supporters, the *practical farmers*; they have always experienced just so much labor and trouble, and get a certain amount in return, and they, particularly, are very apt to despise the so-called model farms, with their boards of officers, discoveries and improvements.

Our Massachusetts State Farm at Westboro' has been thus sneered at repeatedly, and many even of those who are among the progressives, and believe that something new may be discovered, and improvements made, have particularly objected to this place.

They have found fault with the laxity with which experiments have been conducted, at the want of accuracy and value in the returns and accounts of experiments, and at the general failure of the scheme.

Now, first, the scheme is by no means a failure, for very valuable experiments have been tried there and numerous discoveries made; and it may be said that those persons who point at the reports of the Board of Agriculture by the Secretary, C. L. Flint, Esq., as *meagre and inaccurate*, are not just either to the reports or the maker of them. The reports are always compilations of the reports of other societies, to whom all who object to inaccurate reports should look, and of which complain,

not of that general compendium which brings them all together before the public. And, again, whoever complains that Mr. Flint's accounts of transactions, experiments, &c. at Westboro', are *valueless from a too superficial account of the commencement, course and result of experiments*, should remember that the whole matter there is under the charge of some dozen committees, who are responsible for the success of the farm, and failure of the undertakings there—not Mr. Flint, who is merely the Secretary and vehicle for bringing their experiments before the world.

Indeed, it may be said few men could be placed in a more onerous position, to be thus, to many people the proposer and manager of improvements and experiments for whose failure he is blamed, when the whole merit or blame appertains to others, and he could not if he would control the matter.

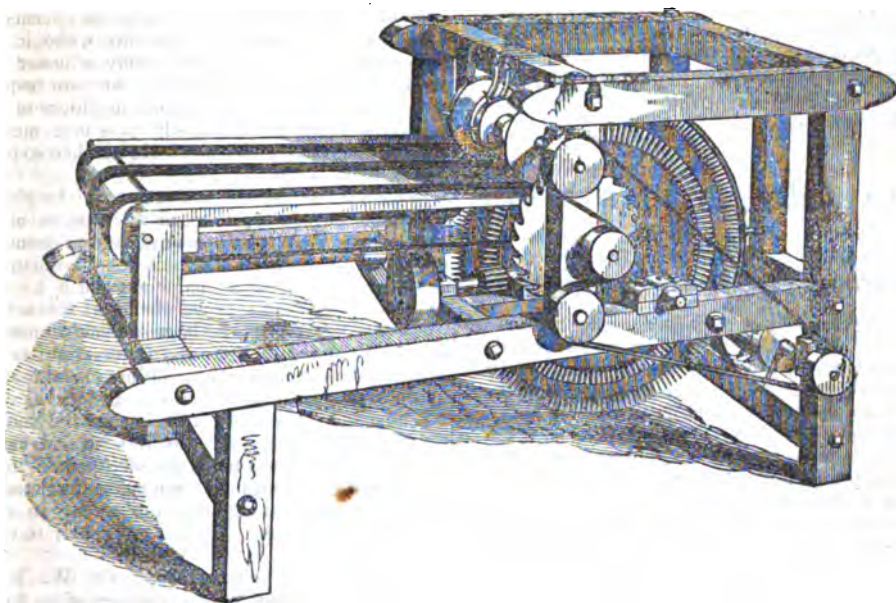
It is the very fact of the large amount of machinery involved and the expense necessary at such a place that discourages general farmers from undertaking improved agriculture; they say it is all very well for public institutions and rich men to dabble in experiments; they can afford to fail—we can't. What will they say when they see that the men who have the best means of judging of the success or failure of such experiments are willing to risk their own capital and time in similar private ventures.

You remember, perhaps, that Dr. W. T. G. Morton, of Ether and Suffolk Pig celebrity, has a fine farm in West Needham. Last year his farm took the premium as a model farm from the Norfolk Agricultural Society; and his dairy of six cows took the State premium of \$150 for the best dairy in Massachusetts. Now this farm, fully stocked with blood stock, Suffolk pigs, and Alderney cows, Mr. C. L. Flint, in company with a friend, Capt. Davis, hired last fall just before harvest, and bought the crops and stock for some \$5000, and are now carrying it on. Here Mr. F. has the opportunity to display his agricultural skill, and to try experiments that the State farm could never give: for here he has no controlling power to interfere with the success or management of his experiments, or to assume the credit where any results, or be responsible for any failures.

Although those who believe in book-farming versus the so-called practical, would have liked that a man in Mr. Flint's position, with all the science, knowledge and experience, his long continuance in the board of agriculture, and his connection with, and supervision over the Westboro' farm, ought to have given him, should take some poor, worn-out farm, there to show more triumphantly the power of science and books; still we cannot but be delighted that such an evidence as this should be given of the faith men really have in their own theories.

With this fine, rich well cultivated farm, and with the superior stock upon, it nothing but the most violent natural accidents can prevent Mr. Flint's trying and proving all the theories and experiments his reading may suggest to him, and there can be no doubt he will furnish us this autumn with statements relative to the commencement, continuance and conclusion of experiments that will demonstrate to the world, conclusively, that book farming is all that it pretends to be, and is capable of regenerating the worn-out lands of New England.

Yours respectfully, RUSTICUS.



MACHINE FOR STRIPPING BROOM CORN.

Among the numberless machines for saving labor, there are few more effectual or more important than this. The old mode, and it is the mode now generally practised, is a slow, tedious, expensive one; expensive, because it requires so much time of able-bodied persons who might be more profitably employed. The way in which it was done, was by placing two pieces of steel or iron on a large block, or some firm place, resembling, somewhat, the letter V, but having a spring to them so as to yield or advance a little according to the size of the handful of brush placed between them. The brush was then drawn slowly through, scraping off the seed, which fell upon the floor or in measures, mixed with more or less of the ends of the husk broken off in the process of scraping.

With the machine figured above the process is far different. It is supplied by belts moving over the platform on which the brush is placed crosswise, in handfuls, in such a position as to have the toothwheel seize the brush just where the hurll and quill join, and carry it to the cylinders, which commence their work at the tip of the brush, straitening it out, and stripping off the seed. The circular cutters cut the quills to a proper length if too long, and the brush leaves the machine stripped of seed, and in a perfect condition.

The machine is safe to use, as those tending it are not liable to those terrible accidents to which they

were exposed in machines where the brush was held in the hands; it will also earn its cost in the saving of brush grown on 200 acres!

It is manufactured in a thorough and desirable manner, by Messrs. Burt, Wright & Co., at Harvard, Mass. See advertisement in another column.

WASHING CLOTHES.

MESSRS. EDITORS:—I noticed in the *Country Gentleman* of June 5th, an inquiry about washing clothes and washing machines. I have never used any machine but the primitive one, which, I suppose, has been in use ever since clothes were washed; so I cannot speak from experience about other machines. But I have used for several years a washing fluid, which very much lessens the labor of washing, without injuring the clothes in the least. It is made as follows: take, for one gallon of water one pound of washing soda, and a quarter of a pound of unslaked lime. Put them in the water, and simmer twenty minutes. When cool, pour off the clear fluid into glass or stone ware, (for it will ruin earthenware, causing it to crack until it falls to pieces.) If the clothes are very dirty, put them in soak over night; wring them them out in the morning; soap them, and put them in the wash-kettle, with enough water to cover them. To a common-sized kettle or boiler full, put a tea-cup-full of fluid. Boil half an hour, then wash well through one suds, and rinse thoroughly in two waters. Those careful housewives, who have always washed their clothes twice, then boiled them, and then washed them again, will think this a very su-

perfidious way of washing; but I know from experience, that my clothes not only wash easier, but look better, and last fully as long, as when I washed in the old way.

This fluid is very good for cleaning paint. A very little put in the water will remove grease or fly-stains, much better than soap. Too much of it will remove the paint also.—S. S. SOCWELL, in *Country Gentleman*.

For the New England Farmer.

HAY—HOW SHALL IT BE USED?

MR. EDITOR:—"Book Farming" has not taught me at what season it is best to feed the different kinds of hay to horses, oxen and cows—also sheep. I have no old hay, but have already housed some 10 or 12 tons of new hay—choice clover, best English hay and some that is about two-thirds white-weed (or daisy) and one-third of good grasses—this last was cut when the daisy was in the height of its bloom and of course the grasses were not quite ready for cutting. Now, the question is, which is best to feed now to horses and oxen? and, generally, which kind is best for each kind of stock above mentioned at the different seasons of the year? My neighbors differ in their opinions; I do not know, being a new farmer. I hope that some of your correspondents can give (and defend) the right opinion by their own well-tryed experience.

Dedham, June 30, 1856. CHESTERHOLME.

REMARKS.—The common practice among farmers is to feed the poor hay during the coldest weather; and we think all who have had experience in feeding cattle, have noticed that stock eat meadow hay more freely during the cold weather of early, or mid-winter, than they do at other times. We can see no reason why the same kind of hay is not equally good for oxen as cows,—or cows as oxen. It is not customary to feed much clover to horses, and yet we should do it freely if the clover were cured well. Sheep are more fond of clover than any other hay,—but it must be cured without the loss of the leaves, and so that the stems retain their juices. The question is practical and interesting—who will shed light upon it?

TO CORRESPONDENTS.—Most of the communications sent us for publication, are of such a character as to make them interesting and instructive to readers generally. But there are occasionally those having more the character of an advertisement than anything else, and those we must insert in their proper department, or not use them. The correspondent who sent us an account of a favorite apple, with a long list of certificates of its excellence, must, we think, upon reflection, see that it appeared to us more like recommending an article for sale, than giving any valuable information to the public. The twenty-five thousand six hundred and eighty-four subscribers to the *Farmer*, or the Publisher, will not be seriously affected by the discontinuance of his subscription.

For the New England Farmer.

CARE OF STOCK.

"Ah, that same old tune, heard it these ten years or more." Have, eh? If you have heeded it, ridicule is but a poor return for the benefits which it has brought you; if not, you judge unadvisedly and condemn prematurely. "Care well for your stock," is a precept which has long been taught, (too frequently in vain,) but which will bear teaching for many a long year, yet future. He who keeps stock, does it for pleasure and profit; neglect and exposure conduce to neither, attention and shelter secure both. There are far too many cattle and sheep kept in New York, whose best protection from the chill blasts of vigorous winter is but the warm side of a barn, or perchance a rail-fence, and if a clump of bushes occupy a corner of the latter it is a wondrous blessing to the poor brutes. Such manner of keep keeps the flesh from the farmers' cattle, and the money from his pockets. Were the wild myth of the transmigration of souls as *truthful* as it is fabulous and absurd, some such owners and keepers might chance to get their just deserts, and shiver over night, under the lee of an alder bush.

Cattle should be stabled; warm, commodious and ventilated stables should be an appendage to every farm in christendom. The advantages of stabling are many and important. Increased health, flesh, and comfort to the animals, economy of time, labor, and patience in feeding, and saving of food consumed; these are a few of the benefits of stabling. Stables for stock should be constructed with an eye to convenience and comfort. Stanchions (or stanchells) are the best means of fastening. Behind the stanchell frame there should be a liberal allowance of space, say 10 feet. In order to secure the full benefits of stabling, which appertain to economy in feeding, there should be a manger in front, with a separate division in front of each animal. This is easily done by erecting a front for the manger some 2 feet, or thereabouts, from the stanchell frame, and about 30 inches high, then nail strips from the top of this front wall to the upper beam of the stanchell frame, place the partition board between these strips, and secure at the bottom by cleets nailed down upon each side of the partition boards.

By this arrangement each animal has its own allowance of food, and is prevented from infringing upon the rights of its mates, either by appropriating their hay or by striking them with its horns. Cattle thus sheltered should be regularly fed and supplied with water—should be turned into the yard to amuse themselves during pleasant days, and should be carded as often as semi-occasionally. Thus attended will they prosper, and so, likewise, will their owner. J. G. K.

SMALL FARMS.—We desire to impress on the common-sense reasoning of every man, the paramount importance of having no more land in cultivation than can be well cultivated. By no means attempt to manage more than you can manage well. Be a FARMER, not a mere earth scraper, lazily scratching up sufficient earth to destroy the face of the soil, and throw seed away, or you will always have to scratch hard for a living. But make your farm a source of pride, and it will surely become a source of profit. Make the object to be not to have MANY, but RICH acres.

VEGETABLE ECONOMY.**FUNCTIONS OF THE LEAVES.**

The leaves are the most important parts of plants, performing various most essential functions in the vegetable economy. By them the actions of respiration, digestion, exhalation and absorption are carried on. The leaf, it is considered, is formed by an extension of the skin or cuticle of the plant, and if examined, it will be found that a skin may be stripped off from either surface, the interstices being composed of cells. The cuticle of the leaf is furnished abundantly throughout its surface with pores, called by botanists stomatas, through which water and gases pass out and enter. These are chiefly or sometimes wholly on the lower surface. By these pores, are carried on the respiration of air, and the exhalation and absorption of water. Experiments have shown that some plants exhale twice their own weight daily. A cabbage has been found to exhale from 15 to 25 ounces daily; a sunflower 20 ounces, on an average of 15 days, and on a warm, dry day, 30 ounces. A leaf of a sunflower weighing $31\frac{1}{2}$ grains, with its stalk immersed in water, took up, in 4 hours, 25 grains; the leaf had increased in weight only $4\frac{1}{2}$ grains, so that $20\frac{1}{2}$ grains had passed off by exhalation. At this rate the leaf would take up its own weight in about 5 hours, and exhale an equal weight in 6 hours.

Plants of a juicy kind, or succulent, have usually very few pores, and require much light to stimulate their evaporation. Hence when melons are grown in a frame, as many leaves as possible should be exposed to the light of the sun, and the accumulation of water from within should be prevented. Some of these plants of the succulent kind, by reason of a deficiency of pores, may be preserved a long time without moisture. In the summer, exhalation is most active; and therefore plants cannot well be transplanted, because from the injury to the roots, absorption is checked, and is not sufficient to supply the loss by exhalation. In young plants, like cabbages and lettuce, the roots suffer but little, and plentiful watering will enable the plant to rally. By keeping plants in the dark, exhalation is checked, and thus a nosegay may be preserved a longer time from withering.

CABBAGES FOR STOCK.—Every farmer, and indeed, every person having a garden and a hen, a pig or a cow, will do well to have some cabbage plants with which to fill the ground when early crops have been removed too late for turnips. The cabbage is a sure grower, and faithful in its mission, whether put out early or late. To secure good, firm heads for table use, requires considerable care in kinds, times, soil, and culture; but to secure a good growth of highly nutritious and valuable food for stock, requires but a small measure of regard for either.

The cabbage contains a full proportion of nitrogen in addition to the oxygen, hydrogen and car-

bon, the elements of the great mass of the vegetable kingdom. In this, it is closely allied to animal food, and on this account as well as others, it is a valuable addition to the usual food of animals. We believe the cabbage worthy of high estimation as a regular field crop, not merely for the pork and cabbage trade, but as food for cattle and hogs, and that it will be extensively cultivated for that purpose; but however this may be, we are confident that the cabbage affords the best means of filling the ground which, from any cause remains vacated the first of August.—*Cultivator and Gazette.*

For the New England Farmer.

THE SPARROW AND THE HEN.

MR. EDITOR:—I know not if there be anything new in what I am about to relate; at any rate, we who have been brought up surrounded by brick walls, look upon many of the common doings of dame Nature as something wonderful, and many of her every-day ways as anomalous or passing strange.

The first instance I have to record is that of a little brown sparrow, which built its tiny nest in a honeysuckle vine trained on a trellis close by the front door. The bird built its nest and then was absent for nearly a week. At length she appeared and laid two little green-colored eggs, each about as large as a good-sized pea. I am very sure there were only two eggs, for I, as well as many others, looked into the nest very frequently during the absence of the parent; we thought she was managing very poorly, her absence, as I have remarked, being frequent and prolonged. She knew, however, better than we could tell her, for lo, and behold, one morning there appeared in the nest four young ones, all, so far as we could judge, perfectly formed, and in no wise connected; she brooded them from the 21st of June until the 1st of July, on which day the upper tier of two flew, and the day following the remainder. I said they flew in tiers, for the nest was so small, they could not all lay on the bottom, and the old bird used to perch in the honeysuckle vine at night. The nest still remains, and shall be respected, and not a straw suffered to be touched or molested. I am in hopes Mistress Sparrow will repeat her performance another season in the same place. I assure her she shall be protected, and that her proceedings have given the occupants of our domicile, as well as numerous visitors, great gratification. At any rate, such doings are well worthy of record.

My ornithological acquirements are so limited, I know not whether to consider the above a regular performance, or a *lusus naturæ*. I can only repeat, well done, Mistress Sparrow! four birds out of two eggs, all reared safely, and I am in hopes, now enjoying themselves amid summer beauties. I would add, that during the whole time the parents seemed perfectly fearless, not in the least alarmed, although numbers passed in and out of the door during the time, and all stopped to observe and admire. The nest was about midway up the trellis so that a person of common altitude could look directly into it. The young birds appeared in a very callow state when they left the nest.

The next act on the part of the feathered tribe, of which I would make brief mention, is that of a hen belonging to a near neighbor of mine, Mr.

John Walker. Mistress Biddy hatched out a fine brood of chicks, but at the expiration of ten days from their announcement into this "breathing world," commenced laying, to which practice she has adhered with true hen-like pertinacity for some three weeks, retiring at stated moments to deposit her egg, and then returning to her maternal duties. It is, indeed, curious, to say the least, to see this model hen engaged in making her daily egg deposit, with her little ones about her; some on her back, some under her wing, and otherwise chicken-like disposed. I know not in what light to view this matter of well-doing, but commend her example as well worthy of imitation by all hendom; I think her kind is rare. W.

Somerville, July, 1856.

REMARKS.—The above are some of the pleasant attractions of country life. We do not believe there is a heart, we care not in whose bosom it beats, if it beats at all, that is not touched by these simple relations. We can easily imagine that dame Sparrow was in a hurry to see her offspring, and commenced her sitting process before the usual complement of eggs was laid, and that the other two eggs were laid *after* incubation had commenced on the first two. Birds build among the climbers immediately about our doors every year, and are a source of pleasure to the whole household. It is next to impossible that children brought up amidst such scenes shall be selfish or indifferent to the welfare of the world.

For the New England Farmer.

BARN SWALLOW.

HIRUNDO AMERICANA.

It is supposed by many persons that this bird in autumn descends to the bottom of ponds and rivers, and there buries itself in the mud until the return of spring; such people entertain a very absurd idea.

If we compare the structure of this bird with those animals that are amphibious, we shall discover a wide difference in the construction of their bodies; the swallow, who is made for an inhabitant of the air, has his whole frame-work made light and buoyant; and to see how nature intended that he should be powerful in his element, the sternum or breast bone is exceedingly large, covering the larger part of the abdomen, and formed below like the keel of a ship, to which is attached the pectoral muscles, which are employed to move the wings, and which in weight exceed all the other part of the body; these constitute the untiring powers that this bird possesses, and which enable him to fly with a velocity as great as a mile in a minute. It also becomes necessary, as they are to be buoyed in the air, that they be specifically lighter; for this the bones, the flesh, and the plumage, are admirably adapted. The lungs are full of vessels through which the air passes into the chest, decarbonizing the blood as it is drawn in, passing at the same time into all the cavities and air-cells of the body, and, likewise into the bones, which become, as M. Chabrier says, "a light gas, being dilated and rarefied by great heat; not only is its specific gravity probably diminished, but it must also contribute to diminish that of the bird by inflating it and supplying all vacancies during the flight."

They, therefore, being thus constituted, must possess a knowledge of the changes in the atmosphere before, and quicker, than any other animal. It is well known that before bad weather, water-fowls retire from the sea, parade the shore and creeks, and are exceedingly clamorous; the humming bird sits sadly by the half-closed flower, the eagle stands erect on a withered branch for hours, under the lee of some tall wood, while the groves are silent, save now and then a faint chirp from some dumpish warbler; but on the change of the atmosphere to fine dry weather, we see the water-fowl stretching far over the sea, the humming bird darting with a speed that almost eludes the sight, the eagle rising on his broad wings, circling higher, and still higher in the clear blue sky, while the woods resound with the sweetest melody. Can it, then, be possible, that an animal so curiously and finely wrought, as to be susceptible of the changes of the atmosphere, could undergo so great a change as they would be subject to, in being immersed in water, or buried in the mud, at the bottom of our rivers, for six months of the year? Could they endure life, with all those air-cells in their bodies, those hollow bones, and vascular lungs, as full of water as they were with air? No, they are migratory, and pass to another climate to spend a more active and joyous season.

This bird is the loveliest and most beautiful species of the swallow tribe; with the tidings that the "swallows are come," we associate all the loveliness of spring, the fields spread in their newness, the green leaf and painted blossom burst from their buds, and "ruddy summer," with its long, warm mornings, maturing noons, and tranquil evenings.

"So when the earth smiles with a summer's ray,
The wanton swallows o'er the valleys play;
In sport each other they so swiftly chase,
Sweeping with easy wings the meadow's face,
They seem upon the ground to fly a race."

Danvers-port, 1856.

A. F.

A FEARFUL SCENE IN A SCHOOL-ROOM.—The *Cleveland Herald* has an article stating that great havoc has been committed by dogs among flocks of sheep in different parts of the State. One farmer had 90 killed in one night another lost an entire flock of 30, and so on. The following incident is said to have occurred in the township of Orange.

A middle-sized savage dog belonging to Mr. Honeywell, rushed into the school-house among the children, biting them right and left. One little girl was dragged all around the school-house by the brute, and six children were bitten. One little girl had a large piece of flesh taken from her hip. The children sought refuge under the benches and wherever they could to get out of the reach of the dog. A man came with a club to the relief of the children, and killed the animal. The dog, according to the statement of the wife of the owner, had been tied up through the winter and spring—of course, because it was a dangerous animal. One of the owner's children were among the bitten. Mr. A. M. Lloyd, from whom we get the facts, was at the spot soon after the occurrence, and the women were cleaning the school-house, and scrubbing the benches, fearing that the dog may have been mad. As the animal was killed, of course it cannot be known whether it was mad, or only naturally savage. The children were under treatment, but of course their friends will suffer under fearful apprehensions for a long time.

OUR OPINION OF TOBACCO.—The editor of the "*Middle States Medical Reformer*," published at Millville, Pa., in answer to a correspondent who asks his opinion of "tobacco chewing," thus expresses himself:

Though treading on sensitive ground, we shall not refrain from placing our "opinion" upon record. We view the use of tobacco as a vile, pernicious and expensive habit. It is derogatory to the virtue of *personal cleanliness*, injurious to health, and a perpetual drain upon the purse. Its tendency is to engender debility, imbecility, disease, and premature death. It tends to exhaust and derange the nervous powers, to induce *dyspepsia* and all its kindred evils, and as it is a recognized principle in nature, that whatever enfeebles the body must, in the end, and in the same degree, enfeeble the mind, it reaches the intellect, and exerts a ruinous effect upon the mind. Thus affecting *body and mind*, it should be totally abandoned. Yet we painfully realize the fact, that the habit is on the increase. O, could those young men who are about *learning* its use, but realize the evils it has in store for them, they would turn away with loathing and disgust, and ne'er touch the "vile stuff" again.

LETTERS FOR CALIFORNIA.—The Post-Office Department has adopted a system for securing the delivery of letters by mail to California, and the Territories of Oregon and Washington. The plan, which is as simple as it is effective, may be explained by the following example: Suppose a letter has been directed to Mr. Frank M. Caldwell, (formerly of Pennsylvania,) Sacramento, California; but it is feared that Mr. Caldwell may not be in Sacramento, and hence may not receive the letter. In this case deposit the letter *as usual*, in the mail for California; but, at the same time, send to the New York Post-Office a *slip of paper*, upon which is copied the *address* upon the letter. This slip of paper must be enclosed, together with a three-cent postage-stamp, in an envelope, and directed to the "Pacific Mail List," New York Post-Office. The address on the slip of paper thus received at the New York Office will be entered in its appropriate place in the "Pacific Mail List," which list is printed, and being sent by each mail to each and every post-office throughout the entire Pacific region, it will point out to Mr. Caldwell, wherever he may be, that a letter for him has been sent to the Sacramento Post-Office. Thousands of letters may thus be safely and *speedily* received, that would otherwise become dead letters. This mode of registering a letter does not require one minute of extra labor to perform it.

An envelope directed to the "Pacific Mail List," pays postage like ordinary mail matter, and must be pre-paid. The three-cent stamp enclosed in the envelope defrays the expense of publication, and must *not* be pasted, but simply enclosed. The slip of paper sent to the New York Office, should be cut to fit the envelope loosely, and enclosed without folding. When two or more addresses are enclosed in the *same* envelope, each address should be copied on a separate slip of paper. Cards will make a good substitute for slips of paper.

It is advisable to give in the address on a letter *the name of the State* from which the person for whom the letter is intended emigrated to the Paci-

fic coast; but, as in many cases this may not be known, the letter may still be registered by sending its address to the "Mail List." We have given the above extended notice, believing that to many of our readers the plan may prove of much service.

For the New England Farmer.

USE OF SALT—SEEDS FROM THE PATENT OFFICE.

MR. EDITOR:—In the article I sent to the *New England Farmer* in regard to the benefit of salt being applied to the plum tree—perhaps my language was a little strong, and I see by your issue of to-day a correspondent has injured one of his trees by its too liberal application. I have no doubt but what this may be possible. It is a powerful stimulant, and my idea is, that its virtues have not begun to become known in farm economy, as yet. What I meant to convey in its use, as indicated in my article, was, that it is a first rate thing for diseased and unthrifty plum trees—that it would almost invariably cure the part diseased, in a good degree destroy the ravages of the curculio, and powerfully promote the growth of the tree. I have found it also a benefit to the quince, and its application sown broadcast, as a preliminary before plowing the garden in the spring. More particularly is this the case where it is the intention to use hog manure. That salt is destined to become more generally into use, I have no doubt. But in making use of new things, too much caution can hardly be used by farmers, when approved and useful things are already known.

Early in the spring, I received from the Agricultural Department of the Patent Office a package of seed, all of which I have planted. Among these were three kinds of lettuce, the Malta cabbage, Admiral cabbage and Hammersmith cabbage, New Mexican white flint corn, Flotbeck Quintal cabbage, white onion, and three different kinds of dwarf beans, and a tall white runner bean, besides several other varieties of seeds. In making mention of this, my object is to call attention to them, and first the lettuce. Each of the above mentioned is of a very superior quality, particularly the Malta; its color is of a light, yellowish green, very bright, crimped leaf with serrated edges; as taken from the bed its taste is mild and pleasant, none of, or very slightly, the bitter tast of our common lettuce. It forms a beautiful and noble head, with considerable body to the leaves. Every way worthy of cultivation, either for home use or market. The Admiral very much resembles the Malta, its color nearly the same, a little lighter, not quite so much body to the leaves, nor does it form so good a head. Its taste has a little more of the bitter to it. Edges of the leaf smoother and brittle. Very excellent variety. The Hammersmith very much resembles a lettuce much cultivated in gardens hereabouts. I should think it the same thing, judging from its appearance, taste, &c.; if any difference, it is more brittle and tender, and not quite so bitter. Its leaves are very crimply and dark green, and is prone to run to seed, unless its growth is rapid and planted in deep rich soil, with thorough cultivation. They all like deep rich soil, with considerable moisture. I may have more to say in regard to these hereafter. I had supposed, from the looks of the seed,

that the New Mexican white flint corn was common about here, until I planted it. At the time of writing this, it stands from five to six feet high in my garden, with no appearance of the "spindle," with a broad, heavy, dark green leaf, looking very much like our southern corn planted here; leaf of a darker green color. It certainly presents a very beautiful appearance while growing in the garden; of course, I cannot speak of its merits "in the pot," as yet, but it has the reputation of being most excellent cooked in its green state, or when dry, ground into meal and used the same as our common Indian meal.

Before closing, a few words in regard to the dwarf white podded beans. These I planted too early, about the middle of May, just before the long rain we had at that time, and I expected the seed would rot in the ground. But they came up well. The color of the seed, a brownish black, smooth, and shining. The leaf and stem of the plant quite dwarfish, and of a pale or light green color, presenting a very delicate appearance. A profuse and early bearer. Pods of a yellowish white, I should say cream color, when cooked as *snaps*. We had our first mess from them the early part of this week; they have no strings to them, very tender, and a peculiar pleasant taste; worthy of a further trial, and will undoubtedly prove themselves a valuable addition to our already extended list of beans. More anon.

NORFOLK.

July 19th, 1856.

For the New England Farmer.

HOW TO SAVE AND MAKE MANURE.

MR. EDITOR:—I have in my little place, (and I recommend it to every one who is building a house) a reservoir laid in cement, into which all my drains run, from privy, kitchen, &c., and also the water from one side of my roof after passing through the privy vault. In this way I make a great deal of liquid manure, which I have been in the habit of pumping out and putting on my little half acre of grass, trees, shrubbery and garden, with large watering pots, and also of pumping into a cart load or two of loam hauled for the purpose. Every spring I clear out of my cellar and back yard a large heap of well sifted coal ashes, from furnace and range, which it has sometimes been a bill of expense to me to have carted away. Now I want to know if it would make good manure to mix this ashes half and half with loam, and pump my liquid manure into it. (a.)

Can any of your scientific readers tell me whether hard coal ashes contains ingredients in a sufficiently active state to absorb the ammonia of the liquid, or would any other chemical change be produced which would convert what I have always supposed to be an inert and valueless material into an active fertilizer? Have any of your readers ever tried a similar experiment with hard coal ashes?

July, 1856.

SUBURBAN.

REMARKS.—(a.) We have no doubt, whatever, that such a mixture would be a highly valuable manure. Plenty of evidence has been given that coal ashes alone is a valuable fertilizer, and when mingled with the other materials mentioned, the whole must be among the best.

For the New England Farmer.

"THE CLOVER YEAR."

It is a common remark of the rural population, "this will be memorable as the clover year." Passing through Worcester county and the eastern part of Hampshire, a little more than a week since, and though very familiar with this region for the last twenty-five years, I never saw so much clover, red, and white, as at the present season. The air is fragrant with the perfume, and the mowings and pastures vocal, as it were, with the hum of the various species of bees, actively employed each shining hour in gathering honey so profusely secreted by the *trifoliums*.

Had the farmers generally served or applied plaster, ashes, guano, or any of the artificial manures, they would have remarked, "the effect is wonderful!" The clovers, though not grasses, are very successfully cultivated with them. White clover for pasturing should be mixed with other grasses. Pure clover pastures, when fed by sheep, have been known to induce disease. Hence the importance of mixing with the grasses, whether the white or red, or any other species of the genus, *trifolium*.

On a comparison of the nutritive matter, of equal quantities of the clovers, white and red, it appears, that the white is inferior, the proportion being 5 to 4.

It is said by Sinclair, an English writer on the subject, that the produce of clover is usually very great after a very severe winter, and inferior after a mild winter.

It is a common remark among the farmers, that land when it produces clover readily, or as it were, spontaneously, is in a good condition for any crop. I heard the best farmer in the Connecticut valley say a few days ago, "I never sow clover seed when I seed down a piece of land, only Timothy. There is clover seed enough in the soil."

Said an M. D., "we shall have a hard winter." "Why, how do you know?" "Because there is so much red clover to furnish the honey bee with an extra amount of honey." "But, sir, did you know that the honey bee does not work on the red clover?" "No!" "It is said by the best Naturalists and most careful observers that they do not."—Thus was explained the sign of a hard winter.

RUSTICUS.

For the New England Farmer.

STRAWBERRIES—COAL ASHES.

The present season my crop of strawberries has been unusually abundant, the size of the fruit large, and the quality in every way satisfactory. For the information of your readers, I will give you a brief account of my treatment of the vines. My beds were mostly renewed last year and the year before, and are a mixture of Boston Pine and Hovey's Seedlings. During the last summer and autumn great pains were taken to keep them free from weeds, and each plant in a hill by itself. For this purpose they were often hoed, and the runners cut off. In the fall I covered them with old hay and litter from the garden, but put on no manure.—When the snow was a foot deep in March, by way of experiment, I had a coating of hard coal ashes put on the snow and the beds. This, as the snow melted, sifted down on the plants, and when the ground was dry the coarse particles were raked off.

The plants put out leaves and buds early, and with great vigor, many of the former have grown near a foot in height, the leaves of an uncommon size, and the yield was I think extraordinary.

Now, whether the hoe'ing, the snow, or the coal ashes produced the result I cannot say, but as I have faith in coal ashes as of some efficacy, and it is quite evident they have done the plant no harm, my opinion is that there is something in the ashes adapted to the wants of the strawberry. If this is the fact, it will be well to make it known, and I trust others will try this and other experiments with this article, and let the public know the result.

Brookline, July, 1856.

L. T. S.

"NO."

There's a word very short, but decided and plain,
And speaks to the purpose at once;
Not a child but its meaning can quickly explain,
Yet oft 'tis too hard to pronounce;
What a world of vexation and trouble 'twould spare,
What pleasure and peace 'twould bestow,
If we turned when temptation would lure and ensnare,
And firmly repulsed it with—"No!"

When the idler would tempt us with trifles and play
To waste the bright moments so dear;
When the scoffer unholy our faith would gainsay,
And mock at the world we revere;
When deception, and falsehood, and guile would invite,
And fleeting enjoyments bestow,
Never palter with truth for a transient delight,
But check the first impulse with—"No!"

In the morning of life, in maturity's day,
Whatever the cares that engage,
Be the precepts of virtue our guide and our stay
Our solace from youth unto age!
Thus the heart shall ne'er waver, no matter how tried,
But firmness and constancy show,
And when passion or folly would draw us aside,
We'd spurn the seducer with—"No!"

For the New England Farmer.

ABOUT POULTRY.

FRIEND BROWN:—I must say that I am highly pleased with the *N. E. Farmer*; the moment it arrives it is read in my family with pleasure; although there are some pieces that do not exactly agree with my experience, still there is much that is very useful. As I am an old man, may be I had better give you some of my experience. I was born a farmer's boy, have owned a farm and lived on it for forty-five years; in that time I have bought and sold a goodly number of oxen, cows, sheep, hogs, guinea pigs, jackasses, mules, and all kinds of poultry, from the full-blooded Cochins down to the little white bantam. The former and the latter are "small potatoes;" the Polands I should like if their flesh was a little better, and if they could see like other hens, and would not be under foot in the stable; other animals often step on them. The frizzled fowl, if kept at all, must be for fancy. For fifteen years I have been trying to get a kind that would lay from two to four eggs a day. Two years ago I had all Polands; they lay well, but I have now a mixed breed. The Chittagongs lay large eggs, but their flesh is not the best; they have large bodies, but after all, I like smaller hens; the old-fashioned yellow legs, I think, will lay as many eggs, and are as profitable, taking all into consider-

ation; when cooked for the table I find the great folks like them best. I might say something about all kinds, but it would only take time, and when the needle came to settle it would point directly at the half-blooded yellow leg Dorkings, one nearly like the old native sort. All pullets lay the best. I never keep a hen more than three years, they are apt to get so fat that they will not lay an egg a month. Were my hens all old, I would not feed them only once a day, and then not all they would eat.

Turkeys are profitable, if your farm is right for them. Geese and ducks are good eating, and very profitable if you live near a pond of water, and can keep them away from your neighbor's premises. I have bought and sold from two to three thousand horses and a lot of mules, and some jackasses. I have lived on the Green Mountain all my days since 1816, and have seen a great deal that relates to the farm, and have laid up a large stock of

EXPERIENCE.

For the New England Farmer.

CULTURE OF ROOTS.

FRIEND BROWN:—I notice in a late number of the *Farmer*, a paragraph urging upon farmers the importance of raising more roots than they usually do, which is a timely suggestion.

It would certainly be for the interest of every one to bestow more attention upon crops that are easily cultivated. If any one will take the right course in the culture of roots, he will double the value of his crops over that of hay for the purpose of feeding stock. The course I would pursue, is to take a piece of grass land that will not produce more than a ton or so to the acre, and then with a plow of the right construction, so as to completely invert the sod, a piece of ground can be had for the purpose with a smooth surface. Put on about twenty cart loads of fine manure to the acre, and work it into the ground well with the harrow; sow rutabaga seed at the rate of a pound to the acre, about the middle to the twentieth of June, and with good care, thinning them so that the plants be left a foot apart, and I feel confident that a crop of at least four hundred bushels can be obtained from an acre, worth twenty-five cents a bushel. I would here suggest a plan in sowing, although it is no new thing to some, but may be so to many, which is to sow three feet apart, instead of the old way of eighteen or twenty inches, thereby avoiding much severe manual labor with the hoe, substituting horse-power with the cultivator, which will lessen the expense of raising roots, as every one must know who has tried it.

I wish to inquire of you or your numerous readers, if you know of any successful experiments ever being made in the way of cooking turnips or other food for stock? I have in my mind a plan that I think would work to a charm. It is to procure a large boiler that can be seen and purchased at Nourse, Mason & Co.'s, manufactured by Mann & Torrance, of N. Y., holding about two barrels, or five bushels; after being sufficiently cooked, take them out into a large trough, then add the requisite quantity of meal, and a little salt, mashing the whole together while scalding hot. After it has cooled enough put it into boxes or on a clean floor, and I know it would be eagerly devoured by them, which I think would be better than in a raw state

Do you not imagine, Mr. Editor, that food thus prepared, would afford a delicious repast to cows giving milk during our cold winters? as much as the difference would be to a person living on bread and water, to change it to smoking hot potatoes and bacon, hot rolls and coffee.

And now I wish to repeat my inquiries if you or your readers know an instance of its being tried, and with what success; for unless it will pay we should have nothing more to do with it, as a matter of course. There are many, doubtless, who if asked their opinion, individually concerning the information sought for, would give an answer in a verbal way; now let all such take a pen in hand, put it upon paper and send it to you for publication, and I doubt not it would make its appearance in your paper in due time.

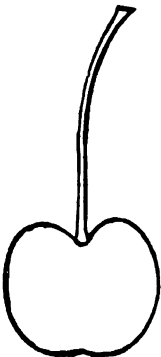
J. UNDERWOOD.
Lexington, 1856.

REMARKS.—The above article got astray or it would have been published before. We have cooked various kinds of roots, such as turnips, carrots, parsnips, &c., in large quantities for swine, and upon which they thrive well and profitably. Who will tell us of the effect of such a process with neat cattle?

CHERRIES.

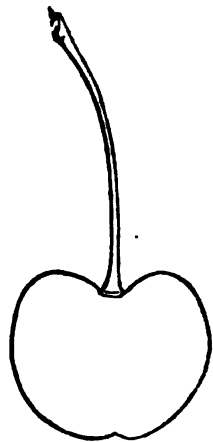
There are two, at least, striking advantages in the cultivation of the cherry. First, we get a quick-growing, handsome shade tree,—one that is ornamental to the grounds, and that will afford a fine shade for us to repose in when we have an inclination that way. Secondly, we get a fruit at a cheap rate, one which all may have, and one that is esteemed by all who indulge in eating any fruit.

In speaking of its uses, Downing says "that as a pleasant and refreshing dessert fruit, the cherry is everywhere highly esteemed. The early season at which it ripens, its juiciness, delicacy and richness, render it always acceptable. While the large and fleshy varieties are exceedingly sweet and luscious, others which are more or less acid, are very valuable for pies, tarts, and various kinds of cookery." Persons setting trees will do well to remember that they may get shade much sooner from cherry trees than from elms and maples, and fruit a good deal sooner, even if the boys and birds take a portion.



MAY DUKE, Early Duke. Medial; obtuse heart-shaped; very dark red; flesh tender, melting, juicy, alighty acid, but at full maturity rich and excellent. 15th to last of June. Answers to cook early, and is long in use. A week earlier than Black Tartarian. Tree of moderate growth, large, spreading, a great bearer. One of the best early cherries, suited to various climates and soils. It endures the climate of the North as far as Maine. Fruit middling hardy.—In this region are large trees 40 or 50 years old. Foreign.

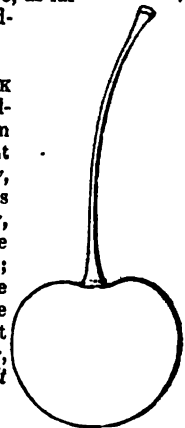
ROCKPORT BIGARREAU. Very large; roundish, heart shaped; beautiful clear and deep red, on amber ground; flesh yellowish, firm, juicy, with a sweet, rich flavor. Ripens from 20th to last of June.—Strong, upright growth. As it is large, handsome, and excellent, it is highly valuable both for the market and private garden.



RICHARDSON. Very large, heart-shaped, but rather short, and tapering much to the point; very dark red, inclining to black; stem rather short and slender. Flesh deep red, half tender, juicy, saccharine, rich, luscious flavor. Last of June and first of July. It keeps well on or off the tree. Good grower and bearer, rather upright, hardy in tree and fruit. Original tree, as far as known,

in the garden of J. B. Richardson, Esq., Boston.

MANNING'S LATE BLACK HEART. Large medial; roundish heart-shaped; dark-red; stem long, middle size; flesh bright red; half tender, rather juicy, spirited, with a pleasant, luscious flavor. Ripens 1 to 10 of July, with Honey Heart. We have seen the original tree at Salem; it is hardy, very vigorous, large and beautiful, from its immense foliage, which screens the fruit from the birds. Great bearer, pretty large. — *Cole's Fruit Book.*



WESTERN FARM JOURNAL. — Louisville, Ky. JAMES P. HALL & Co., Proprietors, W. D. Gallagher, Editor. This paper has for its motto, "The field, the forest, the fireside." It is in large quarto form, on good type and paper, and filled with well written, practical articles. The Editor writes as though he understands the wants of the farmers of Kentucky, and is determined to supply them. We place the *Journal* on our exchange list and wish it great success.

☞ The *Austrian Gazette* states that for the three years, in which horses' flesh has been sold at Vienna, 3,925 horses have been slaughtered, which have furnished 1,902,000 pounds of meat.

BONE-SICKNESS IN COWS.

Mr. J. A. Nash, of Amherst, Mass., writes as follows to the editor of the *Country Gentleman*:

In your paper of a recent date I perceive an inquiry by A. T. Tuttle, of Enfield, to which I deem it important that a correct answer should be given, both for the gratification of that gentleman, and also as affording information important to all dairy farmers on old lands.

It appears that Mr. Tuttle's cows have a morbid, sickly appetite for old bones; that those most affected with the disease, gradually lose their flesh and become poor; that, although they eat well, they appear dumpish, stiff in the joints, weak across the backs—so much so that they can hardly move. Mr. Tuttle has graphically described the symptoms of a disease to which milch cows, on old, worn-out pastures, are always liable; but he has failed to give information respecting his land—whether it is old, or recently cleared, and if old, whether it has been long used for dairy purposes, all of which is important to an intelligent answer to his inquiries.

In the absence of positive information, I shall presume that his lands have been long used for dairy purposes. Indeed the single fact that his cows are thus affected, affords strong presumptive evidence that his lands, both mowing and pastures, but more especially the latter, are dairy-worn. If so, the bone-sickness of his cows is easily pointed out; and although its application may be somewhat expensive, yet the expense incurred will afford a paying investment. The cause of the disease, its cure as now existing, and the prevention of recurrence, are the points claiming our attention.

It should be born in mind that the cow creates nothing. It is true also that the grass creates nothing. Certain inorganic substances exist in the soil, among which are phosphate of lime, potash, soda, common salt, gypsum, &c. The grass cannot create these substances for itself. It can only draw them from the soil. If they exist abundantly in the soil, as in most newly cleared lands, those sweet, nutritious grasses, most valued by the farmer, will grow luxuriantly; but if the soil do not contain them, except in very minute portions, as in old dairy farms, then those nutritious grasses will die out, and meagre, innutritious grasses will take their place. But it so happens that the same substances which are essential to the sweet, nutritious grasses constitute the essentials of milk. Of phosphate of lime, for instance, two ounces are required for the elaboration of each pail of milk in the mysterious organism of the cow; and several pounds are carried off in the bones of every calf sold from the farm. In process of time, this substance, which never exists but in small quantities, is exhausted. When no longer found in the soil, it cannot be in the grasses growing from that soil. But the cow cannot elaborate milk without it. Still there is in the organism of the cow an effort of nature to elaborate milk. The little phosphate contained in her food is all abstracted from her system in the composition of milk. None is left for that steady and constant renovation of her bones which nature requires. Her bones are deprived of what is necessary to keep them in a sound, healthy, constantly renovated state. In other words, her bones are not fed with food convenient for them. Phosphate of lime is the proper food for bones, but this cow's bones have been cheated out of that bone-growing and

bone-renovating substance. She has the *bone-sickness*. Never was a disease more appropriately named. It is called *bone-sickness* for two reasons: 1st, because it is really a disease of the bones, these organs having fallen into an abnormal, sickly state; and 2d, because it is manifested by an unnatural and, in some cases, an almost rabid craving for bones, so that the cows afflicted with it, as Mr. Tuttle says, will run for a bone as if a dog were after them. So much for the *cause*.

For the cure, the best prescription is to remove the cows to a good pasture, in which are plenty of clover and other sweet grasses, if it is summer; and to feed them, if it be winter, on good, well cured hay from richly manured land. Such food will supply the necessities of the milk-giving animal, and will be likely to restore health. If a change of pasture could not be had, it would be well to soil the cows on grass cut from well manured mowing. It would also be well to give them bone-dust, ashes and salt. The latter, of course, should always be within the reach of cows. The two former would tend to mitigate, and might cure the disease. If the three were placed separately, the instinct of the animals would be the best possible guide which to take and which to reject; for I suppose that no animal would eat bone-dust, or ashes, or salt even, unless led to it by a real want of its nature.

Now for the prevention. This has been already intimated; for what would cure, would in this case be likely to prevent a recurrence of the disease. I believe cows never have the bone-sickness, if fed on rich, sweet pasturage, or on hay from well manured mow lands. But what shall be done with our old pastures, so poor that ten acres but keep a cow, and that on grasses so innutritious that she needs, after all bone-dust, ashes, salt, and gypsum to keep her from sickness? Put these things on the land. A compost of 5 bushels of ashes unleached, 4 of oyster-shell lime, 3 of cheap, agricultural salt, 2 of bone-dust, and 1 of gypsum, to the acre, would prevent the *bone-sickness*, and more than pay the expense, in the increased productiveness of the land.

MADDER.

(RUBIA TINCTURUM.)

It has been ascertained of late that this plant is susceptible of cultivation in this country, though the very large quantity of it annually consumed in our clothing establishments, and dye-houses, are imported. The plant has a perennial root and an annual stalk, and those who have carefully investigated it with reference to its habits, say that it does best in a deep, rich, sand loam, moist, but not wet. It requires three summers to come to perfection; and as the roots strike deep, the ground should be plowed and mellowed two feet deep for its reception. Miller says it should be planted with a dibble (it is propagated by off-sets from the old roots,) in rows from two to three feet apart; while Beechstein says they should be planted only six inches asunder. The practice in this country, we believe, for we are not personally familiar with it, is to plant in rows four to five feet apart, and to cultivate rows of corn or potatoes between them,

at least the first year. The season for planting is the last of May or first of June. The acre produces, as things are favorable or unfavorable, from ten to twenty hundred pounds.

Hitherto, it has been cultivated principally in Holland; the province of Zealand, according to a late traveller, being almost covered with it, and from whence it is exported to every part of England and America, "yielding almost incalculable profit."

Several years since it was stated that the imports of madder for the use of our own manufactures amounted, annually, to more than two millions of dollars! There is no reason, as it appears to us, why our farmers should not succeed as well in the cultivation of this important and valuable product, as the Hollanders, and thus avail themselves of a new resource, and an amount of income which would be of great benefit, not only in its effects upon their own interests, individually, but upon the interests of the country at large.

Successful experiments have already been made in Otsego and Madison counties, New York, and very favorable results are anticipated by those who have commenced the business of growing it, as a field crop, in other parts.

For the New England Farmer.

OBJECTIONS TO FARMING.

MR. EDITOR:—As I like farming best of all occupations to which I have as yet turned my thoughts, the desire to become a farmer is naturally uppermost in my mind; but the pleasures and advantages of learning which the farmer enjoys are so few,—when there is no capital to work on,—that I am deterred from ever trying to become a farmer.

In your valuable paper of June 7th, in the biography of Luther Carlton, were contained those very objections, which I have against the life of a farmer. Although it was written for the express purpose of encouraging, yet it has the tendency of disheartening the young beginner in the all important branch of business, farming, if I may judge from myself. The account was altogether too true to be passed by unheeded. It was the only piece, Mr. Editor, that I have seen in your ever-welcome paper for a great while, which pictured out in true colors the life of a poor farmer. The condition of Luther Carlton, from childhood till death, was the same as that of many farmers by whom we are surrounded.

And now, who, Mr. Editor, having read the life of this worthy man, and being in the same situation in regard to the good things of this world—namely, money,—could ever wish to become a farmer? Who is there to whom the love of this life is so dear that he would be willing to bend his neck to the yoke of ignorance, and submit himself to the servitude of a farmer's life for the sake of living? Who is there, who is willing to work hard from sun to sun, toil with might and main six days out of every seven, following in the steps of his fathers, without the means of trying any new course in the art of husbandry, and without the means of carrying out any new thought of his own which may appear to him

to be advantageous? Who is there, who will choose a life in the country, and work and toil day after day for the privilege of breathing the open air and be deprived of the advantages of learning which are opened to professional men; and, to a greater degree to the mechanics who reside in the city than to the farmer? What, Mr. Editor, is a farmer without learning? Even though a man has heaps of money—if he is without the desire of study—is it anything more than downright slavery?

Perhaps, you ask, why has not the farmer the advantages of learning? has he not the privilege of attending lectures on different subjects through the winter? Are there no books and newspapers in the country? Yes, Mr. Editor, there are all these; yet a few farmers only of the "upper ten" can afford to enjoy them? And why? First, because we have not time to spare. Secondly, because our motto is, and has been, and must ever be, if things remain as they are now, "a penny saved is two pence clear." Thirdly, because, having never learned the first principles of science when young, the farmer has no desire to study them when he is old.

These, then, are my objections against farming; first, because I have no money, and no chance of gaining it by farming; secondly, because there are so few opportunities enjoyed by the farmer of improving his mind; and I consider that the only thing worth living for; the only lasting work which we can accomplish upon the earth; the only thing which we can do that will be of any advantage to us hereafter. And therefore, that avocation, and that only, which affords the greatest means for the accomplishment of this purpose will be chosen by me; and would to God that it was, as it might be, farming. Yours respectfully,

Bridgewater, June 9. A FARMER'S SON.

REMARKS.—The foregoing is one of a class of letters that we occasionally receive, and to which we have on several occasions more or less fully replied. This one has remained on file some weeks, not because we lacked the disposition to take immediate notice of the communication, but because other pressing duties have fully occupied our time, and, we may here confess,—as the apology has a direct bearing on the subject of the letter before us,—because, after considerable experience in both, we find it much easier to work on our farm, than to write editorials, and that it is with a hearty reluctance that we go from the labors of the fields to those of the editorial office.

As an expression of the feelings of a multitude of the sons of farmers in all parts of the country, we are disposed to regard with much deference these well-stated objections to farming, however inconclusive they may appear to ourselves.

We must confess, at the outset, to no little surprise at the impression which a biography lately published in our paper has made upon the mind of our young friend. The individual who wrote that article wished to avoid that indiscriminate praise and eulogy which are too common in obituary notices, and he might perhaps have thought too little

of the many readers of the *Farmer*, who knew nothing of the man, and too much of those few friends and acquaintances, to most of whom the success and prosperity of Mr. Carlton were much better known than his early struggles with the "poverty," the "ignorance," and the "slavery" of labor which stand out so prominently in the picture as it is looked upon from the stand-point of "A Farmer's Son." For such readers, and for the credit of farming, it might have been well had he spoken more fully, as we are assured he most truthfully might have done, of the long career of prosperity which Mr. Carlton enjoyed after the obstacles that beset his early life were surmounted. But this was what the feelings of the writer of that sketch, and the known wishes of the family of his respected relative, prompted him to avoid. And we can hardly believe that many will agree with our young friend, that this biography is calculated to dishearten the young farmer. Commencing life without any capital at all, with much poorer advantages of education than are now enjoyed in all parts of New England, he became an intelligent, independent citizen, discharging with marked efficiency and faithfulness the various duties which that term implies, as a town officer, a juror, and a representative in the Legislature of his State,—it does appear to us that the history of Mr. Carlton affords a most encouraging example and stimulant to the youth of our country. Especially from the fact that during his last illness, when he looked upon the past with the same calmness that he did upon the future, and had time to review fully the hardships of his life, which have so disheartened our young friend, he deliberately advised an only son to remain a farmer.

But, says our young friend, "he had to work hard." Ah, there it is! "From sun to sun." Now we admit that farmers do and must work hard. It were worse than useless to deny or disguise that fact. Not the farmer merely, but all his family must work; not occasionally only, but as a general rule, year in and year out. Nor may he hope to succeed unless he act upon the principle expressed by the adage, "a penny saved is two pence clear," which seems to be regarded by "A Farmer's Son" as a dire necessity.

Admitting, then, the full force of this objection to farming, what shall we reply? How shall we induce our spirited young friend to "bend his neck" to this "downright slavery?" Shall we assure him that as he perseveres, labor will grow less irksome; as it becomes a habit, it will become a second nature; as his neck gets calloused, the yoke will feel lighter? However much truth there may be in these assurances—and we believe there is very much—we fear they will not satisfy him. We prefer to put him on the defensive, by asking, what avocation will exempt you from the sad necessity of

labor? What path to excellence goes round all toil, all hard work, all drudgery? The first milestone on that road is the philosopher's stone, but none have ever reached it yet—none ever will.—Property is the product of labor; and what right have you, my friend, to the one, while you withhold the other? If you produce nothing yourself, nor add anything to the comfort and convenience of those who do produce, what right have you to enjoy the results of their labors? In more direct terms, are you not guilty of a wrong—a crime—in seeking for any means by which to live without work? in even urging hard work as an objection against farming? You would probably shudder at the imputation of sharing the spirit of the gambler, the thief, or the robber; yet what but the simple desire to live without work—a desire too often regarded as perfectly innocent—impels to these crimes?

Perhaps from this point we look upon the dark side of the picture; but in all earnestness we desire to caution the youth of our land against the dangers of indulging the idea of living without work, and of forgetting that "he that gathereth by labor shall increase," while "wealth gotten by vanity shall be diminished."

But probably all this has little application to the case of "A Farmer's Son," as he may be looking to some of the many industrial and useful avocations in which the dignity and importance of labor are as fully recognized as upon the farm. In respect to the comparative inducements of these branches of industry and those of agriculture, we should be glad to extend our remarks, but do not propose doing so at this time, and will now only refer to the many articles which have been published in the *Farmer* on this subject.

We must, however, notice another remark of our young friend. He asks, "Who would desire to be a farmer without capital?" Now, while we admit the great want of capital in farming, we may ask, in reply, in what avocation is not capital needed? As a merchant, as a manufacturer, or as a mechanic, what can he do without capital, except to labor or serve as a clerk, agent or journeyman? How many thousands of factory operatives and other "hands" contribute to the wealth of every Amos Lawrence, we have no means of judging; but we saw it stated not long since, that Mr. Chickering, the celebrated piano-manufacturer of Boston, employed about three hundred men, and had some five hundred thousand dollars invested in his business. A bare printing-press for one of the daily papers of this city is said to have cost twenty thousand dollars. Then, why not work a few years as a journeyman farmer, as well as a journeyman merchant or mechanic? As a general rule, we have no doubt that the journeyman farmer lays up money faster than the clerk or mechanic, although the

nominal wages of the latter may be much the largest. The young man on the farm can easily lay aside one thousand dollars by the time he is twenty-eight or thirty years of age, and then by locating according to his means, this sum, with the prudence and energy by which it was accumulated, will enable him to secure a good New England farm. While the probabilities are that the clerk or mechanic will remain a journeyman all his life.

Upon the last objection urged against farming by our young friend, although a very important one, we must be brief. He says farming affords but few opportunities for the improvement of the mind. Were we to admit that, in the circumstances of the past, and in some respects, of the present, there is too much truth in the allegation, do not the signs of the times authorize us to promise better things for the future? The first essential movement in all great revolutions, has already been accomplished in respect to a reform of agricultural education—the need of improvement is felt, deeply felt. Upon this point there is perfect agreement, although as yet there exists a diversity of opinions as to the best means of securing the object. In an excellent article from the *Puritan Recorder*, lately published among the miscellaneous matter on the last page of the weekly *Farmer*, it is said, "that there is no single department of labor on which so much is now written, and so much of science and of experimental philosophy is now employed, as that of agriculture." And, then, the improved implements and the labor-saving machinery which are every year introduced to lighten the toil and to save the time of the farmer. If these considerations do not satisfy "A Farmer's Son" that his present business affords a proper field for the development and exercise of his powers, we can assure him that the longer he mingles in the crowd of a city the stronger will his gratitude grow that he was born upon a farm, and the more reasons will he see for regretting that his children are deprived of the advantages of such a birth and education.

For the New England Farmer.

SALT HAY.

MR. BROWN:—In an editorial last week you made some remarks upon salt marsh and hay. As I think you do not give them their true value, I wish to say a few words in their defence, and hope that some wiser head and nobler pen than mine will come forward and give them their fair worth.

I know nothing of their value in western Massachusetts, but in Essex County I do. Making and applying manures is the grand secret of farming. If Essex County should be deprived of its salt hay, it would sing small in the manure line, for it must be remembered that all the salt hay that is brought on to the farm is so much gain, for there is no manure needed in return. I think you mistake in the two principles which you think universally pre-

vail; they are the exceptions, not the general rule. So far as I am acquainted, the best farmers, and those that have made the most improvement upon their uplands, are those that cut a fair proportion of salt hay for the size of their farm.

There is no need of salt haying's interfering with the other necessary business on the farm; if the manager is a man of good calculations, he may find time to pay proper attention to all his other crops, and some for improving low lands.

I have made no great improvement to boast of, but salt hay has been the first moving spring to enable me to do what I have done. If you will make me a visit, I think I can show you enough to convince you that it is not worse than useless. Also show you two young cows and a bull that I have raised mostly upon it, which I think are no disgrace to my farm.

It is a mistake that cattle must be kept at the starvation point to induce them to eat salt hay, if it is cut in season, and properly cured. It is no proof that cattle are kept upon it because they are poor, for there are poor cattle where there is no salt hay. You must blame the managers, not the hay.

THOMAS HASKELL.

Gloucester, June 27, 1856.

REMARKS.—Well, that is plainly spoken, undoubtedly comes from the heart, and we like the spirit. It does not quite controvert our objections, however, to the attention that is given to the use of salt hay. We did not intend to "blame the hay, but the managers," as our correspondent suggests. Thank you for the invitation, friend H., and shall certainly look at the cows and bull when we find ourselves in your neighborhood.

MIGHTY CEDARS OF CALIFORNIA.

Rev. Dr. Bushnell, of Hartford, writes from California to the New York *Independent* a graphic account of the immense cedars of California, the greatest trees in the world. One of them, which had been felled, he ascertained, by counting the grains of the stump, to be twelve hundred and eighty years old. When Mahomet was at nurse this tree was sprouting. Says the Rev. gentleman:

"It is forest, yet nothing that we mean by forest. There is no under-growth, scarcely anywhere a rock; the surfaces are as beautifully turned as if shaped by a landscape gardener, and dotted all over by myriads of flowers, more delicate, if not more various, than any garden ever grew. Moving along these surfaces, rounding over a hill, or galloping through some silent valley, winding here among the native oaks, casting their round shadows, and here among tall pines and cedars drawing their huge conical shapes on the ground, we seem, in fact, to be riding through some vast park. Indeed, after we had seen the trees and taken their impression, we could think of nothing but to call it the park of the Lord Almighty. The other trees we observed were increasing in size as we neared the place, till finally, descending gently along a western slope among the files of little giants, we came to the gate of the real giants, emerging into the cleared ground of the Big Tree Hotel, between the two sentinels, which are 500 feet high, and stand

only far enough apart for the narrow road to pass between. These were the first of the Washington cedars we had seen; it would really seem that we had never seen a tree before. And yet they were only medium specimens.

Close by the house lay the first cut of the Big Tree *par eminence*; the remaining part, or top, had been cut up and removed. Near this first cut stood the stump, about six feet high, with an arbor mounted on the top, which had been squared down for this purpose, the posts of the arbor standing out in the line of the largest circuit at the ground, and the space between them and the circuit of the top filled in by a floor of short boards. The diameter of the top is by measurement twenty-five feet one way, and twenty-three and one-half the other. The diameter at the ground was thirty-one feet. They are all included in a space of fifty acres, and are only ninety in number. The ground occupied is a rich wet bottom, and the foot of the moist northern slope adjacent, covered also with an undergrowth. And why are they here, just here, and no where else? This, I confess, is to me the greatest, strangest wonder of all, that nowhere in the whole earth is there another known example of these Anakims of the forest; ninety seeds alone have been started, ninety, and no more. Is there, was there no other piece of ground but just this, in the whole world, that could fitly take the seeds of such a growth?—Why have they never spread, why has no one seed of the myriads they sprinkled every year on the earth, ever started in any other locality?

And what a starting it is, when such a seed of life begins to grow. Little did that tiny form of matter, about the size of a parsnip seed, and looking more like it than any other, imagine what it was going to do, what feelings to excite, when it started the first sproutings of the Big Tree! We measured an enormous sugar pine recently felled. Sixty feet from the ground it was six feet in diameter, and it was two hundred and forty feet high. We measured one of the prostrate giants, and two hundred and forty feet from the ground it was six feet in diameter. The top was gone, but it could not have been less than three hundred and fifty feet high. And yet this tree was only eighteen feet in diameter, where the Big Tree was twenty-five. If the Big Tree were hollowed, one might drive the largest load of hay through it without even a brush of contact.

Many of the trees, and all the largest of them that remain, are greatly injured by fire. Their time is therefore shortened, and a long time will be required to bring the smaller ones to their maximum of growth. That a man instigated by the infernal love of money, should have cut down the biggest of them, and skinned the next, one hundred and twenty feet upwards from the ground, (*viz.*: the mother) that he might show or sell the bark of her body, both sound as a rock at the heart, and good for a thousand years to come—O, it surpasses all contempt! And yet to see this giant mother still growing up as before, and bearing her fresh foliage, ripening her seeds, and refusing to die; hiding still her juices and working her pumps in the deep masses of her barkless body, which the sun of two whole years has not been able to season through, dead as it is, and weather-cracked without—it is a sight so grand as almost to compensate for the loss we suffer by the baseness of the human scamp."

CORN-FIELDS.

When on the breath of autumn breeze,
From pastures dry and brown,
Goes floating like an idle thought,
The fair white thistle-down,
O then what joy to walk at will,
Upon the golden harvest hill!

What joy in dreamy ease to lie
Amid a field new shorn,
And see all round on sun-lit slopes
The piled-up stokes of corn,
And send the Fancy wandering o'er
All pleasant harvest fields of yore!

I feel the day; I see the field,
The quivering of the leaves,
And good old Jacob and his house
Binding the yellow sheaves;
And at this very hour I seem
To be with Joseph in his dream.

I see the fields of Bethlehem,
And reapers many a one—
Bending unto their sickles' stroke,
And Boaz looking on;
And Ruth, the Moabitess fair,
Among the gleaners stooping there.

Again I see a little child,
His mother's sole delight,
God's living gift of good unto
The kind, good Shunamite,
To mortal pangs I see him yield,
And the lad bear him from the field.

The sun-bathed quiet of the hills,
The fields of Galilee,
That eighteen hundred years ago
Were full of corn, I see,
And the dear Saviour take his way
'Mid ripe ears on the Sabbath day.

O golden fields of bending corn,
How beautiful they seem!
The reaper-folk, the piled up sheaves,
To me are like a dream;
The sunshine and the very air
Seem of old time, and take me there!

For the New England Farmer.

EFFECTS OF HOME-MADE GUANO.

MR. BROWN:—Having noticed several articles on the value and use of "Home Guano," or hen manure, in the *N. E. Farmer*, and having an accumulation of the droppings of the hen roost for years on hand, about half of which had been heaped up, wet, and have undergone a state of fermentation, the balance being dry, I determined to make an application of it to my corn-field, although not in strict conformity to the course suggested by the correspondents of the *Farmer*. I took something over one-half of a two-acre piece which I had prepared by turning under 40 loads of barn-yard manure, spread on the sod, marked off my land and dropped the guano in rows, a single handful to the hill, from a basket as one would plaster, and covered with a hoe full or two, of soil to the depth of half to three-fourths of an inch deep. On this I planted the corn. The balance of the piece was planted from the same seed the same day, manured with compost. You no doubt have anticipated the result, but for the benefit of those inexperienced in its use, and not appreciating its nutritive or killing qualities, I submit it. While that

planted with compost is up and looks finely, that planted with guano is destroyed "root and branch;" some of it came up, but soon withered, and on examination I found the root eat off or killed, and the kernel turned black. I could see no difference in the effect of the fermented or dry, both retaining the same killing qualities. I have no doubt but a judicious application, with a knowledge of its character would have shown a different result.

Bolton, Vt., June, 1856.

I. R. J.

COMPARATIVE VALUE OF DIFFERENT KINDS OF FOOD.

The careful study of the prices of substances used as food, and their relative value, is a matter too much neglected by most farmers. It is a study incumbent on the farmer—doubly so at the present time, in view of the high prices of all kinds of grain and fodder. We commend the careful perusal of the following article upon this subject, copied from the *Maine Farmer*. It will be found specially applicable at the present time, to western farmers. The time has been, since we have been a resident of the West, when it mattered but little what kinds of food cattle were wintered on, or how much they consumed. Corn found a slow market at from 15 to 18 cents per bushel, payable in "cats and dogs"—wheat, 31 cents; hay, \$2.50 per ton, &c. But the time has come when the western farmer should acquire the best economy in feeding his stock.

"Will you please insert, if convenient, the comparative value of corn with good hay, for feeding store cattle? There are various opinions in regard to it. Some think ten bushels worth a ton of hay.

"There are no certain data, as yet, by which a very certain comparative value of the different kinds of feed can be given. It is true that some very excellent tables have been given by different chemists, who have labored long and diligently in analyzing the substances named, and ascertaining the ingredients of which they are composed, and their proportions in every hundred pounds.

These are undoubtedly correct, and show the comparative amounts of this or that ingredient; and hence a general estimate may be made of their comparative value as feed. It must be remembered, however, that these estimates are only approximations to the truth, and not real truths. The reason is, because the stomach of different animals are formed differently, on purpose to draw nourishment from its owner from materials different from what another one would. The stomach of an ox and that of a horse are different. The horse or the ox will live very well on hay, but the ox will do better on some kinds of poor hay than the horse. They both fatten on the meal of Indian corn, but neither of them could live on meal alone. Their stomachs are made to be distended with bulky material, and if they do not receive this stimulus of distension, they languish. Hence, when we say that 60 lbs. of Indian corn are as good as 100 lbs. of hay, and will yield them as much nourishment, some allowance must be made, for it will not do to say that if you supply them with as much nourishment from a given amount of corn as they would derive from a corresponding amount of hay—you need not feed them with hay at all. A long series of well conducted experiments is necessary, in feed-

ing the animals themselves, to establish the true, unmistakable comparative value of different species of food. Something of the kind has been done, but not enough to establish what is desired. As it is, we can only give our correspondent the tables as established by chemists in their analyses—and we will here copy that of Boussingault—by which it is stated that 100 lbs. of hay may be replaced by

Bran.....	85 lbs.	Peas.....	27 lbs.
Oats.....	68 lbs.	Potatoes.....	230 lbs.
Barley.....	66 lbs.	Carrots.....	332 lbs.
Indian Corn.....	59 lbs.	Wheat Straw.....	426 lbs.
Rye.....	77 lbs.	Oat Straw.....	333 lbs.
Linseed Cake.....	23 lbs.	Barley Straw.....	460 lbs.
Beans.....	23 lbs.	Pea Straw.....	64 lbs.

The editor of the *Genesee Farmer*, (Dr. Lee,) who is exceedingly well "posted up," as the saying is, in these matters, says there can be no doubt that 100 lbs. of ground corn meal mixed with the required bulk of cut straw, will be of more avail in sustaining animal life, during the winter, than any other food that can be obtained at the same price.

In commenting upon the above table, the same writer observes, that, if this table of equivalents can be relied upon, it appears that 100 lbs. of hay is equal to 426 lbs. of wheat straw, and that 22 lbs. of oil cake is equal to 100 lbs. of hay, 68 lbs. of oats, 85 lbs. of bran, &c. Boussingault found that his 17 horses, averaging 1070 lbs. each in weight, ate and did well on a ration of 33 lbs. of hay per day, working eight hours regularly every day. To obtain the same amount of nutritious food in straw, a horse must eat 165 lbs. of the straw per day—a feat which he is incapable of performing. But if we give him 30 lbs. of straw, (equal to 6 lbs. of hay,) 5 lbs. of oil cake, (equal to 22 lbs. of hay,) and 3 lbs. of corn meal, (equal to 5 lbs. of hay,) he will receive the same amount of nourishment, and in about the same bulk, while the cost of wintering him in this way would be considerably reduced.

By carefully studying, says he, the prices of substances used as food, and their relative value, most farmers may save considerable expense in keeping their animals, not by stinting them, (no farmer can afford that,) but by using food which contains the most nutriment for them at a given cost."

THE PLOUGH, LOOM AND ANVIL.—This long-familiar and standard journal comes to us for July with new attractions. In paper and typographical execution, it is equal to many of our best printed books. But the chief attraction which it has recently gained, is in the acquisition of our late fellow-laborer, Professor JOHN A. NASH, of Amherst. Prof. NASH is one of the best agricultural writers in the country; a gentleman of sound judgment, of critical and keen observation. He writes fluently, but in a plain and comprehensive style. Few persons are so well informed in agricultural chemistry as he, and there are a still less number who can so clearly express their ideas on a subject embracing so many technical terms. His *Progressive Farmer*, which is a scientific treatise on agricultural chemistry, ought to be in the hands of every farmer in the land, and there is not one but might be benefited by its perusal. We congratulate Mr.

PARISH, the former able Editor, not only upon the accession of strength brought to the journal, but upon the agreeable and profitable associations he cannot fail to realize with such a "companion in arms."

The terms for the *Plough, Loom and Anvil* are \$3 for a single year, \$5 for two copies or \$6 for three copies. Office, 7 Beckman Street, N. Y.

HOW WOLVES CAJOLE AND CAPTURE WILD HORSES.

Wherever several of the larger wolves associate together for mischief, there is always a numerous train of smaller ones to follow in the rear, and act as auxiliaries in the work of destruction. Two large wolves are sufficient to destroy the most powerful horse, and seldom more than two ever begin the assault, although there may be a score in the gang. It is no less curious than amusing to witness this ingenious mode of attack. If there is no snow, or but little on the ground, two wolves approach in the most playful and caressing manner, lying, rolling and frisking about, until the too credulous and unsuspecting victim is completely put off his guard by curiosity and familiarity. During this time the gang, squatting on their hind quarters, look on at a distance. After some time spent in this way, the two assailants separate, when one approaches the horse's head, the other his tail, with a shyness and cunning peculiar to themselves. At this stage of the attack their frolicsome approaches become very interesting—it is in right good earnest; the former is a mere decoy, the latter is the real assailant, and keeps his eyes steadily fixed on the ham-strings or flank of the horse. The critical moment is then watched, and the attack is simultaneous; both wolves spring at their victim, at the same instant—one to the throat, the other to the flank—and if successful, which they generally are, the hind one never lets go his hold till the horse is completely disabled. Instead of springing forward or kicking to disengage himself, the horse turns round and round without attempting a defence. The wolf before then springs behind, to assist the other. The sinews are cut, and in half the time I have been describing it, the horse is on his side; his struggles are fruitless—the victory is won. At this signal the lookers-on close in at a gallop; but the small fry of followers keep at a respectable distance, until their superiors are gorged, and then they take their turn unmolested.

HOW THEY USE GUANO IN PERU.—A gentleman writing from Arequipa, Peru, gives the following account of the manner in which Peruvians employ guano:

"It is applied to two crops only, maize (Indian corn) and potatoes, carefully by the hand. To maize, when the plant is about two months old, and about three-fourths vara high, one-half handful is applied near each root. A larger quantity is said to be prejudicial, by "burning the plant." The guano is then covered with earth, and a small quantity of water (by irrigation) is applied to "fix the guano." If the state of the soil does not absolutely require it, no more water is applied until after six or eight days.

The quantity required for each "topo," of 5000 varas (about 1½ acre), is four fanegas, or say 500 pounds. For potatoes the quantity required is the same, and is applied much in the same manner as regards the age of the plant, and a small quantity of water to fix the guano. The stalk of the potato is then about one-fourth vara in height, and the earth heaped up in ridges the same as in Britain. A person inserts a spade in the top of the ridge beside each plant, whilst a woman follows, pouring about half a handful of guano into the hole thus made, and covering it with earth, so that the ridge remains the same as before the application of the guano.

To wheat the application of guano is not approved, principally, we believe, on account of the rankness it produces in the stalk, thereby delaying the ripening of the grain—a point of great importance in lands where they count on obtaining two crops a year.

For the New England Farmer.

GOOD FARMING MAKES ITS MARK.

MR. EDITOR:—I am aware the time has been, when a false idea prevailed in relation to agriculture. It was deemed an employment only proper for the lower classes of society. It would do for the serfs of Europe, the "slaves" of America, or men of little means and ingenuity; but not for men of great minds and ability, liberally stored with knowledge. The time has been when such men could levy no tax on mother earth by actual experiment, without bringing themselves into disrepute. There have been, however, worthy exceptions. Abraham was one, Lot another, Jacob, Moses, Job and David were others, and then there have been others; but the idea, which has to a wide extent prevailed, was, that "farming" did not require great minds, that very little knowledge was ample for such an employment, and that noble minds would not be dabbling in such small matters. But where did this opinion originate? who started and held to it? They were shallow, simpering girls, and proud, foppish dandies, who carried their character on their back. They were either the Puritan stock all run out, or some outlandish breed introduced. Their opinion was as false as the head was empty which formed it. The fact is, there is no employment on earth more noble and elevating, more truly praiseworthy, than that of the husbandman. Our Puritan fathers well understood it, too, and so did their daughters. Their parents did not object to their marrying good, honest, common-sense farmers.

Since the days of the Puritans, the false notion referred to has been running its race. I am glad, however, that the tables are being turned, and in spite of all opposition, that agriculture is beginning to take its proper stand with the other arts and sciences. I am truly rejoiced to find the press speaking forth the words of truth and soberness on this important subject. I believe the *New England Farmer* a great aid to this cause, and were it in every family in the land, they would, I believe, find themselves abundantly enriched by its perusal. Farmers must *think* and *read* as well as other men. They do well to tax their *brains* as well as hands. By *thinking* a little, many a fine touch can be put upon matters and things around the house, or barn, in adorning and decorating—or at least, putting every thing in its place.

As I cast about me, wherever I go, I can but mark the appearance of thrift or waste which stares every traveller in the face, and even a careless observer can tell the cause. Around the one is a good, substantial fence, high enough, and strong enough; the other has a sheep-hole here, and a few old boards half nailed there, which a slight touch of an animal would throw down, and while the owner is asleep, the cattle enter, and destroy much of his hard earnings, in a single night. *Shiftlessness* is the cause.

On the subject of adorning, I would like to write a volume, and hope to find time to think more on that subject, soon, for my very soul is pained within me when I see such gross neglect on the part of many as to the whole business of beautifying the front and rear of their buildings with trees of various kinds. I look upon a tree, as I do upon a *tried* friend. Sincerity and fidelity are seen upon its bark, branches, and leaves. A little care and labor furnishes such friends in abundance; a shade in the heat, a shield in the storm.

B. D.

Kennebec, Me.

"WHY THE CAT DOES NOT SWEAT."

An article appeared in the *Country Gentleman* under this head, several months ago, which has been copied into several country papers, and is still going the rounds. The article contained several errors, which, for the sake of the children and youth that may read the piece and obtain false notions, both of the phenomena of the case and the philosophy, should be corrected. The first error is contained in the proposition, that all herbivorous animals sweat, and that all carnivorous animals do not sweat. It may be true that all carnivorous animals never sweat, but it does not follow that all herbivorous animals sweat. The rule is this—all animals that loll, whether carnivorous or herbivorous, never sweat, but throw off their surplus heat from the mouth in the act of lolling. But all animals that never loll, throw off their surplus heat through the skin in the process of sweating. All animals that chew the cud, (except *man*), loll, and therefore never sweat. The hair of oxen and cows will be found to be very wet sometimes on a warm day, but such moisture does not come through the skin, but condenses from the atmosphere upon the hair. This takes place by reason of their bodies having been cooled by throwing the heat from the mouth. Horses generally sweat freely when at work, and especially in hot weather. I have seen horses, however, that seldom sweat any, even in the hottest weather, but would loll like the ox. Hogs, fowls and *cats* even, will loll freely when worried in a hot day.

But the explanation is as erroneous as the statement of the facts of the phenomenon. The reason given is, that the food of the herbivorous animals contains a greater amount of fuel, and, therefore, the heat produced must be thrown off through the skin. Now, it is true that the food of the herbivorous animals contains more of the elements of heat than that of carnivorous, and would produce more heat if it were all burned, and burned as rapidly as the food of the carnivorous animal.

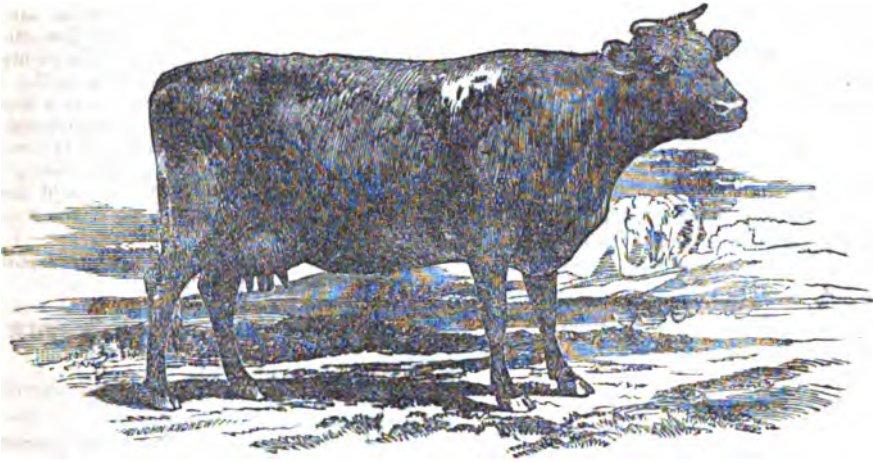
But this is not the case; for but a small proportion of the food of the herbivorous animal is burned at all, but passes through the animal unburned, in the form of dung, or accumulated fat, whilst that which is burned, is burned very slowly, so that it

is not perceptible as it otherwise would be. Whilst the proper food of the carnivorous animal is all of it burned, and burned rapidly, producing a greater amount of immediate, available heat, than would be produced by vegetable food. The dog and the cat are referred to by the writer as animals very sensible to cold. But the dog and the cat are not living in their normal condition. They live mostly upon vegetables. But feed them with plenty of pure flesh, and no animals would endure the cold better. The inhabitants of all cold climates require more meat than those of warmer climates, and require and consume more, also in the winter than in the summer. The reason has already been given, which is, that, though flesh contains less of the elements of heat than vegetable food, it is all burned, and burned more rapidly than vegetable.—J. L. EDGERTON. *Georgia, Va., Feb. 19, 1856.—Country Gentleman.*

HOW THE FLY WALKS ON THE CEILING.

How the fly manages to walk over the smoothest surface with his feet upward, in defiance of the law of gravity, is a phenomenon that would interest us more than it does, were it not so common. It has been generally supposed that his feet were supplied with valves or suckers, and that he is thus enabled to hold himself upwards by atmospheric pressure. Others have attributed this peculiar power to the secretion of a sticky liquid in the feet, which enables him to sustain himself in this seemingly unnatural position. The microscope has demonstrated that in many insects of the fly kind, the foot is furnished with a pair of membranous expansions, termed *pulvilli*, commonly known as valves, and that these are beset with numerous hairs, each of which has a minute disk at its extremity. There is no doubt that this apparatus is connected with the power these insects possess of walking with the feet upwards, but there is still some uncertainty as to the precise manner in which it ministers to this faculty. We learn, however, from the *Medical and Surgical Journal*, that the recent careful observations of Mr. Hepworth, published in the *Quarterly Journal of Microscopic Science*, has led him to a conclusion which seems in harmony with all the facts in the case, viz., that the minute disks at the end of the hairs upon the *pulvilli* act as suckers, and that each of them secretes a liquid, which, though not viscid, serves to make its adhesion perfect.

OLD CHURCH MUSIC.—In the time of Edward Fourth, it was the custom to have whole chapters of the Bible set to music and sung in the churches, and an old writer mentions that the whole of the first chapter of Matthew, containing the genealogy, was so arranged. He goes on very quaintly to say that "while the Bass was holding forth the existence of Abraham, the Tenor, in defiance of nature and chronology, was begetting Isaac; the Counter-Tenor begetting Jacob; and the Treble, begetting Joseph and all his brethren."



AN AYRSHIRE COW.

This breed of cattle has become a favorite one with amateurs, and it is probable that by careful feeding and attention, the largest products of the cow have been developed. These are sometimes surprising. In Middlesex county, we believe, premiums have been paid for butter made from an Ayrshire cow where the product amounted to eighteen pounds per week, and the butter of the very best quality. In other counties in this State, and in other States, we have noticed similar returns.

Mr. Aiton, in his "Treatise on the Dairy Breed of Cows," thus describes the Ayrshire cattle:—"The shapes most approved are—head small, but rather long and narrow at the muzzle; the eye small, but smart and lively; the horns small, clear, crooked, and their roots at considerable distance from each other; neck long and slender, tapering toward the head, with no loose skin below; shoulders thin; fore-quarters thin; hind-quarters large; back straight, broad behind, the joints rather loose and open; carcass deep, and pelvis capacious, and wide over the hips, with round, fleshy buttocks; tail long and small; legs small and short, with firm joints; udder capacious, broad and square, stretching forward, and neither fleshy, low-hung, nor loose; the milk veins large and prominent; teats short, all pointing outward, and at considerable distance from each other; skin thin and loose; hair soft and woolly. The head, bones, horns, and all parts of least value, small; and the general figure compact and well proportioned." Mr. Rankin very properly remarks, that, "compared with other

improved breeds, the thighs, or what is called the twist of the Ayrshire cow, are thin. She is, characteristically, not a fleshy animal."

The Ayrshire farmers prefer their dairy-bulls, according to the feminine aspect of their heads and necks; and wish them not round behind, but broad at the hook-bones and hips, and full in the flanks. Experience, dearly bought, led to this, for the consequence of the crossing of the small native breeds with the heavy cattle imported from the south, was a bony, ill-shaped animal, not much improved as a milker, and its disposition to fat lamentably decreased; it may, however, demand consideration whether the round and compact form of the West Highlander and the Galloway have not been too much sacrificed, and even the defects of the short-horn needlessly perpetuated.

Mr. Aiton says:—"The qualities of a cow are of great importance. Tameness and docility of temper greatly enhance the value of a milch cow. Some degree of hardiness, a sound constitution, and a moderate degree of life and spirits, are qualities to be wished for in a dairy cow, and what those of Ayrshire generally possess. The most valuable quality which a dairy cow can possess is, that she yields much milk, and that of an oily, or butyricaceous, or caseous nature, and that after she has yielded very large quantities of milk for several years, she shall be as valuable for beef as any other breed of cows known; her fat shall be much more mixed through the whole flesh, and she shall fatten faster than any other." This is high praise,

if it can be truly affirmed of the Ayrshire cattle; we are anxious to know the origin, the history, and the general management of this valuable animal.

The origin of the Ayrshire cow is even at the present day, a matter of dispute; all that is certainly known is, that a century ago, there was no such breed in Cunningham, or Ayrshire, or Scotland. Did the Ayrshire cattle arise entirely from a careful selection of the best of the native breed? If they did, it is a circumstance unparalleled in the history of agriculture. The native breed may be ameliorated by careful selection; its value may be incalculably increased, some good qualities—some of its best qualities—may be for the first time developed; but yet, there will be some resemblance to the original stock, and the more we examine the animal, the more clearly we can trace out the characteristic points of the ancestor, although every one of them improved.

For the New England Farmer.

GEOLOGY.

MR. EDITOR:—It seems to me that all young persons, young farmers especially, should try to obtain some just notion of the leading principles of geology and mineralogy. Though I do not pretend to a very accurate knowledge of either of these sciences, yet I have written two brief articles for insertion in your paper, if you deem them worthy, in order to encourage some attention to these studies. When I meet with individuals, as I frequently do, who cannot tell one kind of earth from another, or one kind of stone from another, except by the quantity, color or size, I am amazed beyond measure. I wonder how it has happened, that they have lived all the days of their lives in the very midst of their Creator's works, without ever having their curiosity sufficiently excited to inquire into some of their peculiar properties, qualities, and uses. If I shall but succeed in drawing attention to these two branches of science, I shall accomplish my object.

Geology, as it treats of the formation and structure of the earth, of its rocks, strata, soil, minerals, organic remains, &c., is one of the most interesting and useful branches of knowledge. The object of this science is to investigate and describe the internal structure of the earth, the arrangement of the materials of which it is composed, the circumstances peculiar to its original formation, the different states under which it has existed, and the different changes which it appears to have undergone.

Now, it is perfectly evident, from various considerations, that our knowledge of this important subject must be very shallow and imperfect. For instance, we cannot examine into the interior of the earth to any considerable distance. We can do little more than examine what is denominated the outward crust of the earth, while all the interior parts remain unexplored. So that a question naturally arises, how a competent or accurate knowledge of geology is to be acquired? Can it be learned at school, or from books alone? Where are the schools in which a correct and thorough

knowledge of this subject can be acquired without personal examination? Where are the text-books, so adapted to the capacities of common minds, as to supercede the necessity of personal examination, observation and experience? Nay, where are the geologists, or the mineralogists, who have derived all their information from schools, or from books alone? If geologists and mineralogists themselves have been obliged to take their chief lessons from the works of Nature, rather than from books, so must we and all others. Theory is useless without practice, and practice cannot be advantageously pursued without some kind of theory. In fact, a judicious text book may be of essential service to beginners in pursuing this study, as it will assist them in arranging and classifying the different materials.

The surface of the earth is found to be composed of different strata or beds placed one above the other. These strata or layers are very much mixed, and their direction, matter, thickness and relative condition vary considerably in different places.—These strata are divided into seven classes, as follows:—black earth, clay, sandy earth, marl, bog, chalk, and stony earth. The surface of the globe, by its inequalities, is divided into highland, lowland and the bottom of the sea. At first sight, the solid mass of the earth appears to be a confused assemblage of rocky masses, piled on each other without regularity or order; but, on a nearer view, a variety of beautifying arrangements has been traced by the industry of geologists, and the light of modern discoveries.

The materials of which the solid crust of the earth is composed, have been arranged into the four following classes:—1. *Primitive rocks*, which contain no animal or vegetable remains; the period of whose formation is considered as antecedent to that of the creation of organic beings. These are granite, gneiss, mica slate, clay slate, which occur abundantly in all regions of the globe, with quartz rock, serpentine, granular limestone, &c., which occur more sparingly. 2. *Secondary rocks*, containing organic remains, and are therefore considered as having been formed posterior to the existence of organized beings. These are greywacke, sandstone, limestone, and gypsum of various kinds, slate clay, with certain species of trap; and they are found lying above the primary or primitive rocks. 3. *Alluvial rocks or formations*, consisting of beds of gravel, sand, earth, and moes, and lying above the secondary rocks. This class comprehends those rocky substances formed from previously existing rocks, of which the materials have been broken down by the agency of water and air; they are, therefore, generally loose in their texture, and are never covered with any real solid and rocky secondary strata. 4. *Volcanic rocks*, under which class are comprehended all those rocks, beds of lava, scorix, and other matter, thrown out at certain points of the earth's surface by the action of subterraneous fires.

Many have been deterred from the study of geology by the supposed difficulties which attend it. But no greater difficulties have been found in the pursuit of this study, than in any other useful branch of science. Until the sciences of chemistry and mineralogy had made considerable advances towards that state of perfection in which we now find them, geology was scarcely understood at all; but, with the aid of these sister sciences, geology

has become intelligible to all who have attended to the subject. But without a personal knowledge of these kindred sciences, a competent knowledge of geology may be easily obtained. By examination and careful observation, the different kinds of soil may be easily distinguished and well understood by farmers, at least for all practical purposes, without their being able to make an accurate and critical analysis of all their different constituent properties. And it is this practical knowledge which is most needed by farmers. They have not time, the means, or the ability, to analyze, with any degree of exactness, all the different kinds of soil which they cultivate. But they have the time, the means and the ability, to examine them carefully, to note their differences, and to distinguish accurately many of their peculiar properties.

But it may be asked, what is the use of this study? What is all this knowledge good for? What practical purpose can it subserve? It is a sufficient answer to these inquiries to say, that it has its uses. Besides those of an outward and practical character, relating to the business of this world, it has a mighty influence on the intellect, the heart and the life. Whatever study tends to raise our minds to the Supreme Ruler of the universe—to expand our views of his infinite knowledge and wisdom—to excite our gratitude and admiration—to guard us against erroneous conceptions of his character and providence—and to furnish us with the means of intellectual and moral improvement, must always be useful, and answer a valuable purpose.

JOHN GOLDSBURY.

WEALTH OF THE BRITISH ARISTOCRACY.

In evidence of the wealth amassed by ancient families, the traveller is shown the palaces in Piccadilly, Burlington House, Devonshire House, Lansdowne House in Berkshire Square, and, lower down in the city, a few noble houses which still withstand in all their amplitude the encroachment of streets. The Duke of Bedford includes or included a mile square in the heart of London, where the British Museum, once Montague House, now stands, and the land occupied by Woburn Square, Bedford Square, Russell Square. The Marquis of Westminster built within a few years the series of squares called Belgrave. Stafford House is the noblest palace in London. Northumberland House holds its place by Charing Cross. Chesterfield House remains in Audley Street. Sion House and Holland House are in the suburbs. But most of the historical houses are masked or lost in the modern uses to which trade or charity has converted them. A multitude of town palaces contain inestimable galleries of art.

In the country, the size of private estates is more impressive. From Barnard Castle, I rode on to the highway twenty-three miles from High Force, a fall of the Tees, towards Darlington, past Raby Castle, through the estate of the Duke of Cleveland. The Marquis of Breadalbane rides out of his house a hundred miles in a straight line to the sea, on his own property. The Duke of Sutherland owns the county of Sutherland, stretching across Scotland from sea to sea. The Duke of Devonshire, besides his other estates, owns 96,000 acres in the county of Derby. The Duke of Richmond has 40,000 acres at Goodwood, and 300,000 at Gordon Castle. The Duke of Norfolk's park in Sussex, is fifteen

miles in circuit. An agriculturist bought lately the island of Lewes, in Hebrides, containing 500,000 acres. The possessions of the Earl of Lonsdale gave him eight seats in Parliament. This is the Heptarchy again; and before the Reform of 1832, one hundred and fifty-four persons sent three hundred and seven members to Parliament. The borough-mongers governed England.

These large domains are growing larger. The great estates are absorbing the small freeholds. In 1786, the soil of England was owned by 200,000 corporations and proprietors; and, in 1822, by 32,000. These broad estates find room on this narrow island. All over England, scattered at short intervals among ship-yards, mills, mines and forges, are the paradises of the noble, where the live-long repose and refinement are heightened by the contrast with the roar of industry and necessity, out of which you have stepped aside.—*R. W. Emerson's English Travels.*

For the New England Farmer.

A WORD OF CAUTION.

For ten or twelve years I have been in the habit—till last year—of purchasing trees, shrubs, &c., at Hyde's, or Winship's, near Boston; and have seldom, if ever, had reason to regret.

But last year, a gentlemanly-looking man calling himself Stevens, came along, and said he was making arrangements to supply my neighbors and the public generally with trees, &c., from Flushing, L. I. On inquiry if the establishment at F. with which he was connected, was the one that, a few years ago, had a branch establishment at Brighton, he said yes. On the strength of that assurance, and that of one of my neighbors who knew him, that he had a good reputation, I made a few purchases, and among the rest engaged some buckthorn for a hedge at an extra price, because, as he assured me, they were of extra size. The trees were to be delivered at the Auburndale depot in October.

On meeting with Mr. Breck, of Boston, in the cars, some little time afterwards, and telling him what I had done, he smiled, and asked me why I did not purchase of him, or of somebody with whom I was acquainted, rather than of strangers, and said, that though he knew nothing of Mr. S. in particular, yet one was very apt, in these circumstances, to get *bitten*.

Subsequent to the first engagement I changed my order somewhat, requesting a few new trees, and a reduction of the buckthorn from one thousand to eight hundred and fifty.

When the trees arrived in October at Auburn-dale, our bills came with them, in the name of Messrs. Parsons & Co., of Flushing—Mr. Stevens being their agent—accompanied by a request that we would pay them at the depot. I paid mine at once, but finding from the bill that while the *additions* I requested had been made, the *subtractions* had been forgotten, I asked for a reduction of the price; accordingly, a few shillings were allowed, and Mr. S. promised to *come around* and see me further by-and-bye. I saw him about half an hour afterwards, but as I expected he would call at my house, the final adjustment was not made.

When I came to unwind my parcels in order to set them, I found to my great mortification, that besides other mistakes, some small buckthorn, worth here and at Flushing only \$10 a thousand,

had been sent at \$15 a thousand, instead of a larger kind for which I had already paid him at \$20 a thousand. But Mr. S. was gone, and I saw no remedy but to set them, although the largest—as large as his finger, Mr. S. said—would have been several years in advance of them.

I wrote to Mr. S. at Flushing; and among the rest—still supposing it was all one firm—to Messrs. Parsons & Co. The latter said they had nothing to do with Mr. S., except to sell him largely; though they incidentally told me they never kept any such large buckthorn as Mr. S. had mentioned, and also, that they had forbidden him to use their name in the manner he did. Of Mr. S., I never obtained anything but promises, and of late a few reproaches and insults.

Such information as this statement involves, would have done me good a year ago; and this suggests the notion for suggesting a caution to others. For myself I have learned to suffer and to endure what cannot be cured; but I would save others, if I could, from suffering. Nearly every neighbor who has dealt with Mr. S. complains about him; but I have seen no one who expects he will show himself again in this village.

W. A. ALCOTT.

Auburndale, Mass., Aug. 9, 1856.

SONG OF THE PEASANT WIFE.

BY THE HON. MRS. MORTON.

Come, Patrick, clear up the storms on your brow;
You were kind to me once—will you frown on me now—
Shall the storm settle here when from heaven it departs,
And the cold from without find its way to our hearts?
No, Patrick, no! sure the wintriest weather
Is easily borne when we bear it together.

Though the rain's dropping through, from the roof to the floor,
And the wind whistles free where there once was a door,
Can the rain, or the snow, or the storm, wash away
All the warm vows we made in our love's early day?
No, Patrick, no! sure the dark stormy weather
Is easily borne if we bear it together.

When you stole out to woo me when labor was done,
And the day that was closing to us seemed begun,
Did we care if the sunset was bright on the flowers,
Or if we crept out amid darkness and showers?
No, Patrick, no! we talked, while we braved the wild weather,
Of all we could bear, if we bore it together.

Soon, soon, will these dark dreary days be gone by,
And our hearts be lit up with a beam from the sky!
O, let not our spirits, embittered with pain,
Be dead to the sunshine that come to us then!
Heart in heart, hand in hand, let us welcome the weather,
And sunshine or storm, we will bear it together.

GRAIN PROSPECTS.—Along the Sacramento Valley, even high up, we have very favorable reports of the crops—better, much better, than was anticipated, appear the crops, to all who write us. From accounts around Shaster, very favorable news comes to us of the prospect. The *Sonora Herald* gives a glowing account of the prospects for grain. Our correspondents from the lower coast, from Los Angeles and vicinity, give us very flattering accounts, the crops never looked better, and they will be heavier than last year. Similar news comes from all quarters.

A correspondent from high up the American, writes thus:—"The grain is coming down in every direction. Cradlers and reapers are at work—

weather fine, not so hot as last week; two days the thermometer stood 104°, between two and four o'clock, in the shade; and 160° in the sun. Yield of grain will be very good—hay crop short. Gardens doing well; country quiet, and people universally supporting the action of the Vigilance Committee of San Francisco."—*California Farmer*.

For the New England Farmer.

BOG MEADOWS.

BY HENRY F. FRENCH.

Manchester, N. H., July 24, 1856.

MR. FRENCH:—*Dear Sir,*—Having heard that you have had some experience in reclaiming meadow or bog from its natural state, and fitting it for the production of English grass, I write a few lines to obtain information. My father has, in Auburn, a meadow which can be easily drained, and as I have considerable faith that such pieces of lands may be made valuable if properly—that is scientifically—managed, I am anxious that he should take it in hand. The mud is from twelve to thirty inches deep. Now, after draining, how shall it be treated? Would it be beneficial to draw on and mix with it high land of a sandy or gravelly character? What is the greatest distance that ditches should be apart, and drain it effectually? Is a much greater depth of mud than can be cultivated necessary? If you think the breaking in of such a piece of land will pay, and will answer my questions, giving such suggestions as your experience may dictate, or refer me to any account that you may have published of your work, you will confer a favor.

Respectfully yours, BENJ. CHASE, JR.
H. F. French, Esq., Exeter, N. H.

I thought, on reading the foregoing letter from Mr. Chase, that I could readily refer him to divers articles of my own, on the subject of reclaiming Bog Meadows, but have not been able to find even one. In volume sixth of the *N. E. Farmer*, page 77, is an accurate account of the expenditures and receipts on such an experiment, which shows a pretty satisfactory result, and in vol. 3, page 365, is an article on under-draining, which gives my notions on that subject.

I have reclaimed several meadows, and have never yet attacked one that was not worth the experiment. I have heard of swamps that would not produce good crops, after being well drained, but I never saw, and never expect to see one in New Hampshire. Everybody knows, or may know, on slight reflection, that the richest part of the soil on the hills is constantly working into the low places. This process has gone on for thousands of years, and I know of no compensating process, which returns again this rich deposit to the hills.

These low places, these swamps, are then the very store-houses of Nature, for her treasures of fertility. So theory teaches, and experience verifies the theory. By the same law of gravitation, the water as well as the soil, is left in those valleys, and so we usually find them too wet for our cultivated

crops. Two things then are to be done, before our upland crops of grass, or grain or roots, can thrive upon them. The first is

DRAINING.

Examine your ground carefully, at the outset, and be sure that you know whence the water comes that makes the land too wet. Does it rain down upon the hills, and run into the swamp, and so flood it for want of an outlet? or does some stream back up upon it from below, raised by a dam, which some factory or grist mill has a right to keep up? or does it flow into the land from springs which burst up around the edges, or perhaps in the midst of it, at the bottom? If the water runs in on the surface, the obvious mode of drying the swamp is to make open ditches that shall cut it off before it reaches the low land, or if this cannot be done, to collect it at the outside, in open ditches, and conduct it off through the lot, as speedily as possible. If you have back-water from a dam to contend with, perhaps your best course is to sell out and move off, for in many local investigations which I have witnessed, I have never been able to see any limit to the effect of back-water.

It not only rises to the height of the dam, but is drawn by capillary attraction, as well as piled up by the retardation of the stream, so that nothing but actual experiment can determine where the effect of the dam ceases. Besides that, the effect of back-water, which of course produces stagnant water in the ground, is far worse than that of running water. In nine cases out of ten, however, meadows in this part of the country are rendered too wet by spring water, which is rain water falling on higher land and passing down into the earth till it finds a water-bearing stratum, frequently clay or rock, but sometimes of compact gravel, upon which it runs until it comes out at the surface, or oozes through the soil, rendering it cold and barren. I have at this time a drain open on land which has been mowed eight years, and which I have plowed since haying, to be laid down with grass seed and turnips, which gives a good illustration of the operation of these cold springs. I noticed a wet place after plowing, and had a hole dug with a spade to ascertain the cause. This is a spot on a hill-side, perhaps fifteen feet above the level of the stream which runs along twenty rods below. First came about a foot of dark soil, then two or three inches of white compact sand, then about six inches of red gravel, and under this down to the centre, for aught I know, solid clay. The water filled the hole in an hour or two, to within a foot of the surface of the ground, and this in a dry time. Water cannot pass through clay, but runs on the top of it, in the ground, just as on the surface, only slower, and breaking out thus on the hill-sides, and very often at the edge of a swamp, drowns all vegetation, without showing itself at all on the top of the soil.

Usually water flows into a swamp only from one side. The substratum of clay, or other impervious substance, frequently has a dip or inclination much more regular than the visible surface, and carries the water in one direction, as for instance on my farm, from north to south. To intercept and cut off this water, cut a ditch *across* the course of it, deep enough to cut *into* the stratum on which the water runs, a few inches, otherwise the water will run under the bottom of the ditch, and come out as before.

For want of stones, I have made use of *brush* for underdrains, covering it with turf. These answer a good purpose for eight or ten years. I am now using strips of pine boards, which I happen to have on hand, sawed six inches wide. Two of these I nail together, and lay the edges upon old boards in the bottom of the drain, forming a triangular opening. On this, I place swamp hay, bushes or tan, and cover up. In wet land I find bushes that were laid eight years ago, quite sound, so that I think pine boards will last many years. This seems a shiftless way of doing the business, but my farm affords no stones, and we have not arrived at the dignity of drain tiles yet, and on the whole we may say of it, as a woman said of her husband who was not a pattern of good morals, "He is no great of a husband, but he is a *dreadful sight better than none*."

If open drains are used, cut the boards at an angle of forty-five degrees, so that they will not fall in. If underdrains are used, cut them nearly perpendicular, and as narrow as is convenient.

KILLING OUT THE WILD GRASS.

The cheapest, quickest and best method of killing out the bad grasses, is to *plow* the land. If the mud is very deep, this perhaps cannot be done, but if there is not more than a foot or eighteen inches of mud, land ought to be drained enough, so that the plow can be used. Hauling sand or gravel upon a swamp to form a soil, on top of the wild grass, is an endless task. It requires about one hundred ox cart loads of earth to cover an acre one inch deep, and it requires several inches to kill swamp grass. After the land is plowed, almost any sand, gravel or soil, is beneficial to a bog meadow, applied to the surface and harrowed in with the grass seed. I should advise to apply manure of some kind.

A compost of guano, at the rate of two hundred pounds to the acre, I think is well adapted to bog meadows, which contain the elements of fertility in themselves, though frequently combined with acids which render them unproductive at their first exposure to the air. The action of frost, after a swamp is drained, and exposed to the atmosphere by planting and hoeing for a season, usually is found to add to their fertility.

No rule can be given as to the distance at which

drains should be laid from each other. Frequently a single drain across one or two sides, will cut off all the water from several acres, but if springs burst up at the bottom, drains must be run from them so as to carry off the water. A foot or two of black mud, is as good as a greater depth, so far as I have ascertained, and usually is much more easily cultivated, because cattle may work upon it, however wet it may be, if there is not depth enough of mud to get them mired in.

On the whole, if I were working for a farm in New England, I should regard a wild swamp of twenty or thirty acres as coming in the way of recommendations, only a little lower than the convenience of common schools and gospel privileges. It is up-hill work farming hereabouts, on a farm entirely upland, and I have found no farming operation more satisfactory, than converting a dismal swamp into a beautiful and productive grass field.

For the New England Farmer.

NOTHING LIKE THE FARM.

MR. EDITOR:—It would be a very interesting inquiry, to ascertain the origin why farming and farm labor, either in the house, barn, or out-doors, is by many considered a vulgar employment. There is a better "taste" in these respects, now-a-days, than there was a few years ago, and public opinion is getting right in this matter very fast. The first account we have of man is as a farmer, or tiller of the ground. At the commencement of his creation, God placed the stamp of his approbation upon man as a farmer. And thus we find it all through the Bible. The great majority of God's favored people, we have reason to believe, were farmers; many of them of great intelligence, wealth and influence. There are few men of the present day, if any, who can compare with good old Job, in this respect, and from what is handed down to us, from history and antiquarian research, the men in some respects equal, if not indeed in advance of, our farmers of the present time, in the management of their flocks and herds, as well as "the fruits of the earth." Then, so far as the respectability of farming is concerned, and its superiority over all other callings, it has the Divine approbation in making the first man, "created a little lower than the angels," a farmer, and as such, "seed time and harvest" shall be continued to him until the closing up of all things, and there will be no further use for the ox, nor the plow, and the earth shall be no more.

To me, I can conceive of no employment so well calculated to ennoble the soul, expand the mind, soften and humanize the feelings, and cause mankind to prove themselves "created a little lower than the angels," than the occupation of the farmer. He can work his broad acres in all the dignity and independence of his manhood, and "look from nature up to nature's God," as little dependent as any one on God's earth for all the necessities of his dependent life. All other employments, but for his, would prove futile and abortive; every other calling has his for its basis, and without it, they were useless. I would that our complaining farmers, our

sighing maidens, and our restless farmers' sons, could but realize their high vocation. If they would but comprehend it, they are, indeed, the "salt of the earth," but O, how many of them have lost their savor. If contentment is ever to be found, and fully realized in this world, it will, in my judgment, be found with the tiller of the soil. There are few men capable of understanding right from wrong, but long to be the owner of land. No other professions carry with them such a satisfaction of security and pleasure, as the ownership of land. Ask the careworn and toiling merchant, why he thus toils almost unceasingly, day and night, scarcely known in his home or family, except upon the Sabbath, and then, perhaps, his thoughts busy with the past or future. He will tell you, it is that he may acquire a competency, with which he hopes some day to purchase a farm, and upon which he can retire from the care, anxiety, and bustle of business, and spend his declining years, happy with his family, and what God has given him.

Young men and maidens, take my advice, and stay at home with the old folks. Assist them in carrying on the old farm operations. Remember the old adage, "that all is not gold that glitters;" that no concerns of life but what has its cares, and if you would be happy, virtuous, healthy, with a sound mind in a sound body, if you would enjoy all the pure pleasures of this life, free from its perplexities, that it is possible in this world reasonably to expect—stay at home; stick by the farm. Make it everything it is capable of, and yourself equal to its privileges, and my word for it, your life will be a useful and happy one, your death peaceful, and you will go to your reward.

August, 1856.

T. Q. NORTON.

ENGLISH CHARACTERISTICS.

These Saxons are the hands of mankind. They have the taste for toil, a distaste for pleasure or repose, and the telescopic appreciation of distant gain. They are the wealth-makers—and by dint of mental faculty, which has its own conditions. The Saxon works after liking, or, only for himself; and to set him at work, and to begin to draw his monstrous values out of barren Britain, all dishonor, fret, and barrier must be removed, and then his energies begin to play.

The Scandinavian fancied himself surrounded by the Trolls—a kind of goblin men, with vast power of work and skilful production—divine stevedores, carpenters, reapers, smiths, and masons, swift to reward every kindness done them, with gifts of gold and silver. In all English history, this dream comes to pass. Certain Trolls or working brains, under the names of Alfred, Bede, Caxton, Bracton, Camden, Drake, Selden, Dugdale, Newton, Gibbon, Brindley, Watt, Wedgewood, dwell in the troll-mounts of Britain, and turn the sweat of their face to power and renown.

When Thor and his companions arrive at Utgard, he is told that "nobody is permitted to remain here, unless he understand some art, and excel in it all other men." The same question is still put to the posterity of Thor. A nation of laborers, every man is trained to some one art or detail, and aims at perfection in that; not content unless he has something in which he thinks he surpasses all other men. He would rather not do anything at all, than not do it well. I suppose no people have

such thoroughness;—from the highest to the lowest, every man meaning to be master of his art.

They have approved their Saxon blood, by their sea-going qualities; their descent from Odin's smiths, by their hereditary skill in working in iron; their British birth, by husbandry and immense wheat harvests; and justified their occupancy of the centre of habitable land, by their supreme ability and cosmopolitan spirit. They have tilled, builded, forged, spun, and woven. They have made the island a thoroughfare; and London a shop, a law-court, a record-office, and scientific bureau, inviting to strangers, a sanctuary to refugees of every political and religious opinion; and such a city, that almost every active man, in any nation, finds himself, at one time or other, forced to visit it.

I find the Englishman to be him of all men who stands firmest in his shoes. They have in themselves what they value in their horses, mettle and bottom. On the day of my arrival in Liverpool, a gentleman in describing to me the Lord Lieutenant of Ireland, happened to say, "Lord Clarendon has pluck like a cock, and will fight till he dies;" and, what I heard first, I heard last, and the one thing the English value is pluck. The cabmen have it; the merchants have it; the bishops have it; the women have it; the journals have it; the *Times* newspaper, they say, is the pluckiest thing in England, and Sydney Smith had made it a proverb, that little Lord John Russell, the minister, would take the command of the Channel fleet to-morrow.

They require you to dare to be of your own opinion, and they hate the practical cowards who cannot in affairs answer directly yes or no. They dare to displease, nay, they will let you break all the commandments, if you do it natively, and with spirit. You must be somebody; then you may do this or that, as you will.—*R. W. Emerson's English Traits.*

For the New England Farmer.

DISEASES OF THE PLUM.

I have, Mr. Editor, for several years been among the croakers in regard to plums. I have been apprehensive that this, one of the finest and most delicious of all the fruits of the earth, was destined to become extinct under the combined attacks of the black wart and curculio. But I begin to hope for better things, and I hasten to give my brief experience of a few months past, in the hope that it may accomplish something towards arresting the decadence of the plum.

I have a few young and thrifty plum trees in my garden, of choice varieties, some of which have just begun to bear. For two years past, I have been in the habit of cutting away with a knife the fungus called the black wart, as fast as it made its appearance, and sometimes at the expense of cruel amputations of quite large limbs. I almost destroyed one or two of my finest trees in that way. Late last spring, however, one of my neighbors told me that he had cured his plum trees of the wart by sewing up a small quantity of common salt, (say half a pint) loosely in a cotton bag, and placing one in the lower crotch of each tree. An experiment so easy and simple, you may rest assured, I was not long in trying; and I am happy to say, with great apparent success. Some very

trifling excrescences have since made their appearance, but nothing to interrupt or injure the growth of the trees, which now show extraordinary thrift. Had I begun the experiment earlier in the spring, I am quite confident that the warts would have entirely ceased. As it is, I have cut away perhaps half a dozen very small ones, and rubbed the wounded place with salt, and I feel that I have got the mastery of the disease.

I believe fruit growers are not agreed as to the cause of the black wart in the plum. There is certainly a minute insect in the case; but whether it is the cause, or only the result of the disease, I am unable to say with certainty. My impression is, however, that the insect poisons the tree, interrupts the flow of the sap, and thus creates a fungus, which becomes black by exposure to the sun and air. A similar excrescence, but of a reddish brown color, sometimes appears upon the quince bush, and I have seen the fruit of the quince dwarfed into a kind of hard substance, which, when cut with a knife, resembles the wart on the plum. If the disease be occasioned by an insect, I can readily conceive that the salt in the bag, dissolved somewhat by each successive shower, and thereby covering the bark, might be offensive to the insect, and arrest its progress up the tree.

As to the curculio, which attacks the plum in preference to all other fruit, in consequence of the smoothness of its skin, I think it can be kept off in a great degree by the application of tar around the tree, the same as the canker worm is kept off. The curculio is a kind of beetle with wings, but uses those wings very reluctantly in ascending into the tree. It greatly prefers to make its way up the trunk by crawling, and in all such cases, the tar would prove a pretty sure remedy. Mr. Kenrick, in his "American Orchardist," suggests that the curculio dislikes the smell of tar, and that coal tar, especially, placed in the tree, might keep off the insect. In my own case, I placed some tarred paper around my plum trees, and applied fresh tar, mixed with oil about twice a week, to keep off the canker worms which I shook from the trees. I continued the application a few days after the canker worms had disappeared; and all I can say is, that among the few plums on my trees, there is no appearance of the bite of the curculio. A neighbor of mine threw lime freely upon his plum trees; but, although it killed many of the leaves, it did not prevent the curculio from biting a large portion of the plums. I feel quite confident that the tar, if applied from the time the plums have attained the size of a pea until they are half grown, will prove a more effectual remedy than any yet known to fruit growers.

E. C. P.

Somerville, 1856.

INSTINCT OF HORSES.—It is asserted as a fact, says the Cincinnati *Times*, that some of the horses in the service of the Fire Department become entirely restless, and seem anxious to "be off" the moment the fire-bell commences ringing—and though gentle at other times, are no sooner in the traces of an engine, than they dart off at the top of their speed. They seem to partake of all the excitement of the firemen on such occasions. An incident, resulting rather seriously to Mr. John Wilson, a member of fire company No. 10, exhibiting this instinct, occurred yesterday afternoon. Mr.

Wilson had one of the horses of the company hitched in a cart, and was driving leisurely along the street, when the fire bells commenced ringing. The horse immediately became excited, and whirling, started for the engine house at full speed. Mr. Wilson found it almost impossible to manage him. The horse ran on until he came to the engine, when in turning the corner, he upset the cart. Mr. Wilson was thrown out, and the wheel of the cart passed over him, crushing his ribs.

A DAY IN OLD ESSEX.

After a day and night of sweet repose at the summer residence of the proprietor of the *Farmer*, at Lynn Beach, we started with new energies for a stroll through the ancient town of Danvers. The heat, during the last days of July and the first days in August, had been intense, and man and the vegetable kingdom drooped under it. There had been, however, no pinching drought; the grass and foliage were clean, and the corn still spread its broad leaves to the sun and the kissing breezes as they passed.

Essex county is nearly a continuous village, or cluster of cities and towns, in whatever direction it is traversed, and is, probably, more densely populated than any similar extent of territory in the union. It has great wealth, and its commerce and fisheries are unrivalled by any other section of country, while it is equally distinguished for its varied and excellent manufacture of many of the important articles of trade. But, notwithstanding all the temptations to go down to the sea in ships, and to invest capital in commercial, manufacturing and mechanical pursuits, the habits of industry which characterize the people, together with their good taste and good sense, have prompted them to a most beautiful, as well as profitable cultivation of the soil. And though it be stubborn and hard, here presenting abrupt hills, and there sinking into repulsive swamps, yet the indomitable energy of these pilgrim descendants, coupled with their perceptions of the beautiful, has made every part of the county to blossom with attractions. The swamp is reclaimed, and fertile with sweet grasses, elegant villas look down from the gentle hills, while in quiet seclusion stands the substantial farm house and its appurtenances, the rational home of intelligent and patriotic men and women. The ledges that once glittered in the sun, are now in the loving embraces of the bignonia, the clematis, or honeysuckle, refreshing the eye of the traveller, as he passes over the unrivalled blue gravel highways of the county. All around him are representatives of a high degree of civilization, and of the elegancies as well as comforts of life. The church, the school-house, the town-hall, the forge, bench, tan-pit, the garden, plethoric with flowers and new vegetables, and the fields, though narrow they may be, stooping with their burdens! These are the

true battlements of a State, better than cannon, or moated grounds, or edicts, or fiery banners. The lap of industry here is full; and though the sea reaches up its arms and is ever taking away, like the goddess of the harvest, the energy and will of the people again fills the bin, the bale, box, or barrel, and the world is still supplied.

The Essexonians are patterns of industry, thrift and patriotism. They were patriotic in the revolution—they would be again if they were needed. When the foot of the enemy was on the soil of Lexington and Concord,—not on the necks of the people,—Danvers men bled freely, but their breath ceased forever. Essex county was settled early. Salem as early as 1626; Newbury in 1633, and Ipswich in 1634, had an organized church. It is full of historical land-marks, incidents, and associations, and to the historian, traveller, or even the lover of rural beauty, presents numerous attractions scarcely to be found in any other portion of our country. It is a conglomerate of the commercial, the manufacturing, and mechanical, and charms of country life. The deep bass of the ever restless sea lulls you to repose at night, and the sharp clang of the sounding anvil wakens from delicious dreams in the morning, or lowing cows, or bleating lambs, or the busy hum of the manufacturers' great wheel, greet the ear at every turn. The people of Essex county will never die of a surfeit,—they cannot spare time for that. And yet, they can give thousands to perpetuate free institutions, to erect academies, or top the hill with a church, or a school-house. They visit foreign climes, and return laden with valuable experiences of men and things, under widely different circumstances, or send out their sons to arrange or direct the most important interests in other nations. The Honorable GEORGE PEABODY, a banker of London, and of world-wide reputation, is now about revisiting his native town of Danvers.

But we must rein up our Pegasus, a little, or he will canter with us so pleasantly among these Essex people that we shall never get away.

Everybody knows S. P. FOWLER, Esq., of Danversport, in Essex county; at least, everybody who has read the delightful descriptions of *The Birds of New England*, in these columns,—and they make a good part of the world. Mr. Fowler is a true son of Massachusetts. He loves her history—and few understand it better—her soil, her trees, plants, animals and insects, and everything in her borders that is good, with the ardor of youth or a first love. We found him in the counting-room of his tannery, but clad in the suitable habiliments of his vocation, taking a part in, as well as directing, the manipulations of the craft. But his true character and tastes were not to be found in the pits over which we were led, for in a moment we emerged through a narrow door-way into fairy-land,—a land of fruits

and flowers, of rare shrubs and trees. Here stood the beautiful magnolia (not the lofty grandiflora) and there the noble tulip tree, liriodendron, some 40 feet in height, and other half-hardy and foreign plants interspersed through the ample grounds, and taking us by surprise as we passed along. There were retreats from the sun under clusters of creeping plants, summer-houses inviting to repose, edges of box or grass, or a curve some twenty feet long, edged with the white bone of a whale that once sported in Arctic seas. The bottom of the garden is laved by an arm of the sea, where each afflux of the tide brings sparkling Atlantic waters for the daily ablutions of the family. If this was not the original garden of Eden, fair Eves trim its paths and pluck its flowers, and grace it with their presence and care.

Among other evidences of good taste, we had the pleasure of examining a portfolio of drawings of the nests and eggs of the birds of New England, and some twenty of them accompanied by paintings of the birds themselves. These were by AUGUSTUS FOWLER, Esq., a brother of S. P., and one of our correspondents. These drawings and paintings are executed with great fidelity and skill, and although done at intervals of leisure from the cares of his business, and without any teaching from others, they would reflect credit upon our best artists.

In the afternoon we visited some of the ancient trees in the neighborhood, and found an Elm at The Plains, which, at eighty feet from the ground measured twenty feet in circumference; another at the Kimball Place, fifteen feet in circumference, and spreading 100 feet, and on the Eppes farm at South Danvers, one that measured, six feet from the ground, 18 feet in circumference. This was a noble specimen. Between ten and fifteen feet from the ground it throws out ten limbs, each of which would make a good-sized tree, and containing in all, it was judged, from six to eight cords of wood! In a grove near the residence of Mr. AARON PUTNAM, we found a specimen of the Locust, eight feet in circumference, the largest we had ever seen. There were several other fine trees, but none so large as these. The grove is extensive, and not a sign of the borer discoverable in it. The branches were covered with a luxuriant foliage, and the trunks clean and healthy. The bark stood in sutures of from four to six inches deep, with a greyish silver appearance, and all indicating great age. Other groves of locust which we saw were all more or less affected by the borer, and some of them were rapidly dying out.

On the Eppes farm we saw the precise locality of the original Danvers winter sweet apple. There is now a fine tree on the spot from a shoot which sprang from the old stump. We tasted the apple, and found it sweet, and undoubtedly true to the original. The old Endicott pear tree afforded also,

a deep interest. It was planted as is supposed by the first Governor of Massachusetts in 1630. Endicott was the first Governor—but he was sent over from England, to look after the affairs of the New England Company. Winthrop was the first Governor chosen by the people. We have already given a portrait of this pear tree in these columns. It is surrounded by a rude fence to keep off sacrilegious hands, and although dilapidated and bowed with age, it looks as if it might last, with good care fifty years longer.

A thousand recollections and associations crowd the mind of the visitor as he stands on these grounds. From a little eminence may be seen in the distance many an object which would, and perhaps has, engaged the attention of the poet, the antiquarian, the historian and statesman, and arrest the attention of the indifferent observer; for it seems that

"Nature enthroned as queen of loveliest scenes,
Her outstretched sceptre o'er the valley gleams;
Each verdant hill, each vale, each rare-seen flower,
Proclaims her presence, demonstrates her power."

Retracing our steps as the afternoon waned, we passed the house where Gen. Putnam was born, the wolf-hunter of Connecticut and hero of the Revolution. But light faded too fast—

"Eve's mist now veiled the valley from the sight,
The hills were shrouded by approaching night;
The laborer hastened from his daily care,
The cattle ceased with him in toll to share;
The feathered songster left his leafy throne,—
All, all is silent, we are left alone."

Man's activity has ceased—the city lies in repose—but the restless sea still washes the trending shore with its monotonous tones; it tires the ear, but never tires itself. Our pleasant visit is ended, and has brought healthful fatigue. So

"Out, brief candle,"

and let us seek that repose which to the laboring man is sweet.

VALUE OF HAY CAPS.

On Friday, the first day of August, we had a small field of oats cut which were wet by showers before they were fairly wilted. It was two or three days before they were sufficiently dry to be cocked, owing to the frequent and sudden showers. When cocked, they were covered with unpainted cotton cloth caps, and remained in that position five days. One cock was left uncovered—that was soaked to the bottom, and when dried, had lost that peculiar aroma which all good fodder, when perfectly cured, gives out. The covered cocks were wet on the edges near the ground, but a large portion of each was dry, and after being exposed to the sun a few hours, were bright and sweet. Half the cost of the caps was saved in this single crop.

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 17.

FRANCE.

It may make the views developed in these numbers still clearer, if we compare the agriculture of France, in a few particulars, with that of England.

France is one of the finest countries in the world. Its soil and climate are both superior to those of England. This is the testimony of Arthur Young, and of all observers. Take the thirty-six departments which are grouped around Paris, and you find in them forty millions of acres, which surpass in quality, as they do in extent, the twenty-six millions of English acres. You find scarcely any mountains, few natural marshes, extensive plains, sound almost throughout, a soil sufficiently deep, and of a nature most suitable for production, rich deposits in the broad valleys of the Seine and the Loire, and their tributaries, a climate not so moist but warmer than that of England, less favorable, perhaps, to meadow vegetation, but more suitable for ripening wheat and other grains; all the products of England, obtained with less trouble, and in addition other valuable products, such as sugar, tobacco, wine, fruits, textile and oleaginous plants. It would be easy to carry out, step by step, the comparison between France and England, and the result would show the marked superiority of the French soil; that there are no lands so bad, in France, for which worse may not be found in England, nor so rich in England, which may not be equalled or even surpassed, in France.

The French landscape is peculiar and characteristic. The country is comparatively level, and fences almost unknown. Here and there is a chateau, or large farm-house, with its appendages. But the common or laboring people live chiefly in villages, scattered about like islands over the face of the country, with the spire of the church overtopping the cluster of houses. These villages, with a paved street running through them, more resemble compact towns, than they do our country villages. While the English farmers, with Protestant independence, live in their solitary and remote farm-houses; the French country people congregate in these compact villages, for social enjoyment, and to celebrate the rites and festivals of the Catholic church, going every morning a good distance to their field labors.

The French farmer is of a happier temperament than the English, but less energetic, and self-sustained and persistent; he is more economical, and will live well on a smaller income than the English farmer. The love of a country life is not part of the nature of a Frenchman, as it is of an Englishman; if he prospers and wishes to play a part, his heart turns more towards Paris than to his estate. France, too, has been a country of conscriptions, of war, of revolution, sometimes of anarchy, twice of invasions, never of liberty. The elements of society are volcanic, and political shocks, at intervals not infrequent, scatter and waste the accumulations of capital, and impede the national progress in agriculture, as in all arts.

But let us leave these details, and compare, first, the sheep husbandry of the two countries. The whole British Islands contain sixty-two millions of acres, and support thirty-five millions of sheep; while France contains one hundred and six millions

of acres, and supports the same number. In proportion to its acres, France should support sixty millions of sheep. But the difference between the two countries becomes more striking, if we compare France with England proper, which has thirty millions of sheep, on thirty millions of acres, or one sheep to each acre. France, on the other hand, devotes three acres to one sheep—so that England proper, in the proportion of acres, has three times as many sheep as France.

All that France has done, in the last eighty years, to improve the race of sheep, may be summed up almost entirely in the statement, that France has introduced the Merinos from Spain; she has not improved her breeds nor developed their size and weight. France has made the wool of its sheep the primary object, and not meat. England, on the other hand, has made meat the principal product of her flocks, and wool the accessory product. The sheep of England average, in net weight of meat, 80 pounds each; those of France 40 pounds each. Of her flock, England slaughters annually, ten millions; the sheep of France not being precocious, France slaughters annually eight millions. England obtains from her flock eight hundred millions of pounds of meat, annually; France, from her flock, three hundred and twenty millions of pounds. The weight of wool on the English sheep, from their size, is greater than on French sheep; but the quality of French wool is superior to that of English wool. Therefore, the product of wool from the flocks of the two countries may be called equal, in value; though the English think they have an advantage in this respect, of twelve or fifteen per cent. Inasmuch, as England feeds three sheep on the number of acres on which France feeds one, and as the produce of English sheep is more than double that of French sheep, the conclusion to which we are brought, in regard to the sheep husbandry of the two countries is, that the return of an English sheep farm is six times greater than that of a French one.

Compare the agriculture of the two countries, in respect to cows and their produce. France possesses four millions of cows, and Great Britain three millions. The French work their cows, and inure them to labor, whereby they become a strong and hardy race, and, in consequence of want of care, bad food and labor, lose their milking qualities. Three-fourths of the French cows are not really milch cows, which all the English are. Observing Frenchmen are of the opinion that the United Kingdom milks from its three millions of cows, double the quantity of milk, which France does from her four millions. Owing to the number of manufacturing towns and cities with which England is crowded, the English farmer sells his milk at four cents a quart, while the price of milk in France is two cents a quart. It is supposed, therefore, that while the French farmers realize twenty millions of dollars, annually, as the produce of four millions of cows, the English farmers realize eighty millions of dollars, as the product of three millions.

Of cattle, Great Britain supports eight million head, of the most improved breeds, never worked, perfect animals, fed and developed so as to yield the greatest weight of butchers' meat, at the earliest age, and killed at the precise period when the animals have reached maximum growth. France supports ten million head of unimproved breeds,

many of them worked to an age when growth has long ceased, that is, after the period when the food consumed by them contributes to their growth; and many of them killed as calves, at a period when growth is most rapid. Great Britain slaughters, annually, two million head of cattle, of an average weight of 600 pounds; France slaughters annually four million head, all of an average weight of 240 pounds. At ten cents a pound, the butchers' meat of two millions of British cattle would pay a hundred and twenty millions of dollars; while the butchers' meat of four millions of French cattle would pay ninety-six millions of dollars.

But that I may avoid wearying the reader with statistics, it may be said in a few words, comparing the total production of the two agricultures, that while France, as a whole, produces ten dollars an acre, England proper produces twenty dollars. The animal produce alone of an English farm is equal to, at least, the total produce of a French farm of equal area—all the vegetable production being additional. Taking the three principal kinds of domestic animals, sheep, oxen, and pigs, the English obtain from these four times more than the French do in meat, milk and wool. Comparing the wheat raised in France, with all its acres, it does not average more than two bushels to the acre; comparing all the wheat raised in England to all its acres, it averages four bushels to the acre.

But the most striking feature, in comparing the two agricultures, is that while the animal produce of England is greater in value than the vegetable produce, the animal produce of France is less than half the value of the vegetable produce. This is a most instructive statement to farmers of every country: for it may be laid down as an axiom in agriculture, that when the animal produce of the country is equal, in value, to the vegetable, its agriculture is prosperous, and when the animal falls far short, in value, of the vegetable produce, its agriculture is in an unsatisfactory condition. We have seen in Ireland how poor its agriculture was, and the fact stood before us, that its animal produce was far below its vegetable, in value; we see the same thing in France; while in England, we find a rich agriculture, accompanied by the fact, that its animal produce is greater in value than its vegetable. The reason is plain enough, to wit, that the great means of increasing the fertility of the soil are the manures of domestic animals. If I could write but one lesson on the door-post of every farm-house in the land, it would be this:—"It is live stock which makes an ungrateful soil available." Agricultural societies, farmers' clubs, wise and grave men in legislative halls, assemble to discuss the subject of manures, and memorialize, respecting guano islands; and it is well, and wise suggestions are, doubtless, made; but this lesson should be, first, inculcated on every farmer, that he must first of all bring his farm and his live stock into such a condition, and into such a relation to each other, that his live stock shall be in proportion to the number of his acres, and in such a proportion, that his annual animal produce on his farm shall at least equal the vegetable in value; then, if he have not manure enough, or knows not how to make it, or how to apply it, to the best advantage, "let him consult the brethren." This lesson may, perhaps, be neglected on new western lands, during the brief days of their virgin fertility; but it cannot be ignored long in northern countries without sad results.

M.

LENGTH OF TREE ROOTS.

The practice adopted by many cultivators of fruit, shows that the distance to which the trees extend their roots is but very imperfectly comprehended or understood. We allude more particularly to the practice of digging or loosening small circles of earth at the foot of the trunk, or of working the soil up mellow but a short distance off. We have recently made some measurements to prove the length of the roots of the peach tree. A number of young trees of equal size, and all of the same variety, (the Tillotson,) were set on a piece of ground of uniform quality, at the same time. They were equally cultivated for two or three years, and grew alike. For the past two years, the ground has been allowed to become covered with grass, which has been pastured; but near one side of the orchard, a heap of old straw, manure, &c., has been deposited but has not been worked into the soil, consequently all the fertility which the roots have obtained has soaked into the soil. The trees are now about two and a half inches in diameter, and ten feet high to the tip of the highest branches.

The following are the effects of the heap of manure and litter, already described. The tree which stood within two feet of this heap, and whose roots could freely extend under it on one side, has made a growth of shoots the past season, *more than four feet and a half long*. The next tree, seven feet off, had grown *over two feet*. The third tree, fifteen feet off, made a growth of *fourteen inches*. The fourth tree, twenty-three feet off, and all others at greater distances, made no growth more than about *eight inches*. The fourteen-inch shoots weighed about triple the eight-inch shoots, and the two-foot shoots fifteen times as much, those which grew four and a half feet about seventy times as much.

This experiment proves conclusively, that trees ten feet high will send off their roots in search of nourishment to a distance of fifteen feet, and what they thus get on one side only, or through about one-fourth part of their roots, will increase their shoots to triple weight. Consequently, if a tree of this size stood in grass, a circle of fertility thirty feet in diameter, or fifteen feet distant on each side, would greatly increase its thriftiness; decidedly more, according to our own experiments, than if a circle only four feet in diameter were dug about the foot of its trunk.

If the circle of fertility were only fourteen feet in diameter, or approached within seven feet, the result would be quadrupled, according to the preceding experiments.

Altogether, these results show the great importance of *broadcast* cultivation, and that young trees only ten feet high, and two and a half inches in diameter, even if placed *thirty feet apart*, have already extended their roots so far as to meet together.

An experiment was made by the celebrated Jethro Tull, to determine the length of the roots of the turnip. A piece of hard and sterile ground was selected, and an oblong space dug out of it, about a foot wide at one end, and eight feet wide at the other. This space was filled with rich earth, and a row of turnips planted along the middle. Those at the narrow end were smallest, and they continued to become larger all the way to the wide end, showing that the roots from the bottoms of these bulbs, extended four feet each way. Doubtless the fibres from the roots of most weeds and other plants are quite as long, and if so, the fallacy is evident of the

practice commonly adopted, of leaving a narrow strip or small circle for cultivation, where young orchards are planted with other crops. Suppose, for example, that a crop be planted within two feet of a row of trees; the roots would extend beyond the trees, and withdraw much nourishment which the latter ought to retain. If the roots of the crop were only four feet long, a strip of unoccupied land should be left eight feet wide, without taking the roots of the trees into the account. If the latter were only four feet also, then the vacant and cultivated strip would have to be sixteen feet wide. But in two or three years the tree roots would extend much further, and occupy all the surface.—*Country Gent.*

MY FIRST WHISTLE.

Of all the toys I have ever known,

I loved that whistle best;

It was my first, it was my own,
And I was doubly blest.

'Twas Saturday, and afternoon,
That schoolboy's jubilee,
When the young heart is all in tune,
From book and ferule free.

I then was in my seventh year;
The birds were all a-singing;
Above a brook that rippled clear
A willow tree was swinging.

My brother Charles was very 'oute,
He climbed that willow tree;
He cut a branch, and I was mute
Thg while with ecstasy.

With penknife did he cut it round,
And gave the bark a wring;
He shaped the mouth, and tried the sound,
It was a glorious thing!

I blew that whistle, full of joy,
It echoed o'er the ground;
And never since that simple toy
Such music have I found.

I've seen blue eyes, I've tasted wines,
With many toys been blest.
But backward memory still inclines
To love the whistle best.

For the New England Farmer.

HISTORY OF THE SWALLOW FAMILY.

No. 1.

BY LEANDER WETHERELL.

Already has the culmination of summer passed. The luxuriant verdure and freshness of the meadows, the pasture and the forest, have faded and are fast vanishing away. The insects and the birds, which are the harbingers of the advent of spring and summer, also serve to remind the careful observer of summer's decay and final departure. As the freshness of childhood and youth soon fade from the human face, however carefully cherished, so does the lovely freshness of summer give place to mature autumn. Of the numerous birds that indicate the near approach of summer, there is, perhaps, none that is regarded as a more sure precursor of that season of flowers than the swallow. So does its early departure remind the disciple of nature, that the summer is fast waning. If the swallow, fire-fly and rose-bug remind us of early summer, so does the drumming of the locust, or dog-day fly, and the shrilling of the fall cricket, and the departure of

the swallow remind us that autumn is nigh, even at the door. How charming and inspiring these voices of the seasons. How strikingly they proclaim the wisdom and the goodness of God; and happy is he, whose soul, by culture, is attuned to these rich harmonies, for he has enjoyment and pleasure that the multitude know nothing of, any more than the blind do of color, or the deaf of vocal sounds.

The Barn Swallow, *Hirundo rustica* of Audubon, *H. Americana* of Wilson, and *H. rufa* of Gmelin, and others, is known to almost everybody that knows any bird by the common name, called barn swallow, from the fact of their generally building their nests in the barn. Every body seems to welcome with enthusiastic delight the swallows on their first appearance as the heralds of the return of joyous and flowery summer, for a train of delightful ideas and emotions at once fill the mind. Of all the bird families, there is none, probably—except the humming-bird—that surpasses the swallow in swiftness of flight and habits of activity on the wing. What a striking contrast in this respect between the swallow and most other birds. Wilson makes the following calculation: "Let us suppose that the swallow flies at the rate of a mile a minute, which I believe to be within the truth; and that it is so engaged for ten hours a day, and further, allowing that it lives ten years, it would fly in this time, 2,190,000 miles, equal to 87 times round the globe." And yet, it is claimed and advocated by some that this wonderful aerial seraph, as it were, on the approach of winter, aye, before summer is gone, descends to the bottom of lakes, ponds, rivers and brooks, and there hibernates with toads, and frogs, and snakes, and eels, and salamanders, and lizards, and snapping turtles; or, according to other wise ones, seeks winter quarters in some hollow tree, where squirrels and reptiles sometimes make their dwelling place during the winter, and there remains until the return of spring, in a state of torpidity. Other birds, it is admitted by these writers, are migratory, and fly away to warm regions to spend the cold season. But the swallow, whose wing power is superior to all, it is claimed and maintained, does away the winter at the bottom of a mill-pond or lake, with the reptile genus, about the lowest order of creation. Such absurd notions are not really worthy of refutation. The wonder is that such an hypothesis can find a single advocate. Yet there are those in New England, aye, in Boston, sometimes called the Athens of America, who maintain this absurdity, without one single authenticated fact to confirm it.

Says Audubon, the barn swallow first appears in New Orleans about the middle of Feb.; in the Middle States from the first to the middle of April; and arrive in New England from the first to the tenth of May. At the close of the breeding season, the swallows prepare to depart toward the South, leaving hereabouts soon after the 20th of August. For several days before they take their final departure, they may be observed collected in family groups on the roofs of barns, dead trees and fences, as if engaged in social converse about the migratory journey soon to be undertaken. The thought of sadness comes over the mind as one contemplates their departure, to be absent at the South for almost three-fourths of the year, as he views them for the last time in their accustomed place, on the bright morning preceding the day of their

departure, just ready to rise high above the trees to pursue their journey.

They visit the North in pairs, and return to the South in flocks. It is now a favorable opportunity to notice from day to day, for a few days, the habits of these cheerful and happy birds. They seem remarkably sociable and lively. Let persons be stationed in a line southward, and note their observations, and these flocks will be seen journeying toward the tropics. Says Audubon:—"I saw flocks of swallows for several days near St. Augustine, just preceding Dec. 1st." He was of the opinion that they wintered along the South coast of the Gulf of Mexico.

The habits of the barn swallow are very interesting, and pretty well known, even to the most careless observers. Let the readers of the *New England Farmer* observe the day of the swallow's departure, this summer, the day when you see the last flock, and note it down in your daily journal.

For the New England Farmer.

DEEP PLOWING.

BY F. HOLBROOK.

MY FRIEND BROWN:—I was pleased with the article in a late number of the *Farmer*, from your able Northampton correspondent, E. C., on the subject of Deep Plowing. So far as I know, his views are entirely correct; and the good results realized from gradually deepening his plowing, are such as I should expect would follow his practice. He also relates the instance occurring in his neighborhood, of a gentleman from Boston having at once put a great plow beam deep into land which had not before been plowed more than five inches deep, and turning up a large mass of under soil which had never before seen the day, without manuring the land at all, and finding that good crops did not follow the practice, he and his neighbors concluded that deep plowing would not do, that it "killed the land." This is by no means a singular and solitary case of indiscriminate deep plowing, and of incorrect and hasty conclusions drawn therefrom. Similar cases are of too frequent occurrence, and the public should be cautioned against plunging the plow into a poor subsoil at hap-hazard.

The average depth of plowing in New England will not perhaps exceed five to six inches. Now take two farms of equal soil and location, equally manured well, and otherwise cultivated alike, except that on one the plowing is gradually and judiciously deepened till an active surface soil of eight to ten inches is attained, while the other is never plowed more than five or six inches deep, and I feel quite sure that the land plowed deepest will produce the best of the two, and be worth the most in after years, either to sell or to keep. Especially will the advantages of deep plowing be manifest, in those hot and dry seasons which in our climate so frequently occur, when the crops of all kinds will be much more likely to stand through

the drought and yield well in a soil deeply worked, than in one that is shallow, with perhaps a natural hard pan near the surface, or an artificial one, produced by the oft repeated action of the sole of the plow and feet of the oxen or horses, in an invariably shallow furrow channel.

An old friend who has resided now twenty years in Illinois, calling on me the other day, remarked that in portions of that State the farmers were already finding it advantageous to plow deeper than formerly, when the land was new; that on his farm, with a surface soil mostly of vegetable mould, on a subsoil of clay, he was now succeeding better in the production of crops, by deep plowing, notwithstanding that the surface soil is somewhat worn, than he did formerly by shallow plowing and a virgin soil; and that every third or fourth year there occurred a protracted summer drought, which was apt to spoil the corn crop planted on shallow furrows, but by deeper plowing the bad effects of the drought were, in a measure, overcome, and a fair yield of corn secured.

From several years of practice and somewhat particular observation, I am persuaded that there are but very few, if any, lands that may not be benefited by gradually deepening the soil, say an inch or two at each breaking up from grass, until a depth of eight to ten inches is obtained. The better class of lands will of course be susceptible of a deeper tilth than could perhaps ever be conveniently given to those of the poorest quality, with naturally a very thin surface soil, and a loose, hungry, or sour, or cold subsoil. The former will also allow of a more rapid increase in depth of furrow than would be advisable in the cultivation of the latter. Of course, no one can reasonably expect that deep plowing, alone, will make the thin primitive soils of New England highly productive. We cannot at the best do much at farming here, without the liberal use of fertilizers accompanying good cultivation. But the advocates of deeper plowing than commonly prevails claim that, in connection with good farming otherwise, their system insures a greater improvement of the farm and more uniformly good crops, taking all kinds of seasons into view, than can be realized from a shallow tilth; that land deeply and thoroughly plowed, derives more advantage from desirable atmospheric influences, is easier to work in the after-cultivation of the crops, and susceptible of more thorough pulverization, than can be attained by the shallow and superficial plowing which too commonly prevails.

But as remarked at the outset, a portion of the community need to be cautioned against indiscriminate deep plowing. Many persons are now yearly going to farming from other business, entering upon their new calling, or what was, perhaps, the pursuit of their younger and happiest days, with much enthusiasm and delight, and at the first go-

off at farming, they do not readily see how there can be too much of so good a thing as deep plowing. The mistake committed by the gentleman from Boston, as related by your Northampton correspondent, is therefore of frequent occurrence. Land of inferior quality, especially as regards the subsoils, and that never was plowed more than four to six inches deep, is, perhaps, at once plowed ten or twelve inches deep, turning up a huge slice of loose and hungry, or cold, or sour subsoil, and burying the manure at the bottom of the deep furrow, away from the agents of decomposition, where it lies perhaps quite inert; the crops are planted on the deep furrows, and not succeeding well, the proprietor is perhaps mortified and discouraged, and concludes that deep plowing will not do. Now the great point is to study the nature and condition of the soil and subsoil, and then adapt the practice to them. In some cases, where the subsoil is quite good, and manure can be plentifully applied, even if the land has heretofore been plowed shallow, a furrow eight or nine inches may at once be taken, with benefit to the land and all the crops of the rotation following—especially if fine compost is plentifully and thoroughly intermingled with the under soil now turned up to the surface, by cross plowing to the depth of four inches. The after-cultivation of the crop also will stir the subsoil and manure up together. It is a good practice in such cases, to leave the sod, or, what was before the deep plowing, the surface, underneath through the whole rotation, and the subsoil on top, where it is made active by the compost intermingled with it, and by the modifying influences of the atmosphere. If, when preparing this land for grain and grass seeds, the sod is thus left undisturbed beneath, and the seeds are cast upon the subsoil turned up at the first plowing, the new surface, while the land lies in mowing, will be filled with the thickly matted sward, so that by the time the land again needs plowing, this portion that was originally subsoil, will be well charged with vegetable matter, and be good, active soil, adding materially to the depth of the soil of the field. This I call good farming. There are other cases, where, the subsoil being not so promising, but still not very forbidding, the plowing may be advantageously deepened some two inches at a time, till the desirable depth is attained; and there are others, where the land being decidedly poor, with a sour and deleterious subsoil, the plowing cannot be profitably deepened, except by a very gradual process; though still a little at a time of the subsoil may be brought up and corrected by good tillage, and in time a soil of comfortable depth be attained. In these matters one's eyes and observation must be wide awake, and his own good judgment must be the guide in practice.

I have sometimes thought, that in farming, almost more than in any other business, theories and

methods in themselves, most excellent, are hastily condemned from being injudiciously practiced, while it is wholly the bad management that is at fault, and should be condemned.

Brattleboro', Vt., August 7, 1856.

OLD GORDON AND HIS LADDIES.

John Gordon, who died near Turriff, Bangashire, some time ago, attained the age of one hundred and thirty-two. All the travellers who chanced to call at the neighboring inn of Turriff, were uniformly directed by the landlady, Mrs. Wallace, to the cottage of the patriarch, "where they wad see," she used to say, "the auldest man i' Bangashire—ay, in a' the world." Among the visitors one day, about the close of harvest, was a young Englishman, who, coming up to the door of the cottage, accosted a venerable looking man employed in knitting hose, with, "So my old friend, can you see to knit at your advanced period of life? One hundred and thirty-two is truly a rare age."

"Deil's in the man! it'll be my grandfather ye're seeking—I'm only seventy-three, ye'll find him round the corner o' the hous." On turning round the corner, the stranger encountered a debilitated old man, whose whitened locks bore testimony to his having long passed the meridian of life, and whom the stranger at once concluded to be Jordon himself. "You seem wonderfully fresh, my good sir, for so old a man! I doubt not you have experienced many vicissitudes in the course of your very long life." "What's your wull, sir?" inquired the person addressed, whose sense of hearing was somewhat impaired. The observation was repeated. "O, ye'll be wanting my father, I reckon—he's i' the yard there!" The stranger now entered the garden, where he at last found the venerable old man busily employed in digging potatoes, and humming the "Battle of Harlaw." "I have had some difficulty in finding you, friend, as I successively encountered your grandson and son, both of whom I mistook for you; indeed, they seem as old as yourself. Your labor is rather hard for one of your advanced age." "It is," replied John; "but I am thankfu' that I'm able for't, as the laddies, puir things, are no very stout, now!"

Glasgow Railway Journal.

TO ASCERTAIN THE WEIGHT OF HAY BY MEASUREMENT.—We observe a statement going the rounds in some of the agricultural journals, that 100 cubic feet of hay in a stack or mow, make a ton!! In a work, published some years ago, we think the author said 268 cubical feet of hay in a mow, which had become well settled, make a ton. "Hay in the field-rick," says Low, weighs somewhat better than 112 lbs. the cubic yard, after being comprised in the stack, it weighs from 140 to 180 lbs., and when old 200 lbs." Or from 270 to 482 cubic feet will make a ton.

We have had considerable experience in this matter, as we put up a building some years ago, for the purpose of stowing away hay, which we intended for market. For several years we sold hay from this building, both weighing and measuring the quantity sold, till at last we came to the conclusion that weighing was unnecessary.

Since that, we have measured large quantities,

for our neighbors, who have sold at vendues, and, so far as we have learned, the purchasers were well satisfied. It appears to apply well to clear timothy, and clear clover, or a mixture of the two. Take a mow of 12 or 15 feet in depth, and which has been filled with hay, as it was drawn from the field, and has been lying till spring, and measure the length, breadth and height in feet—multiply them to get the cubical content. For instance—the length is 20 feet, breadth 40 feet, and height 16 feet—20 times 40 make 800, multiplied by 16, equal 12,800 cubic feet, which being divided by 700, the number of feet that make a ton of 2000 lbs., will give 1828½ lbs. The top of a mow, say about one-third, we rate at 800 feet to the ton, the middle 700 feet, and the bottom of the mow at 600; so the whole bulk would average 700 feet, if the mow is 12 or 15 feet deep, but if only 5 or 6 feet deep, count 800 feet for a ton, and so accordingly with other bulks.—*New Jersey Farmer.*

PRINCIPLES OF AGRICULTURE.

A paper was recently read before the Farmers' Club of New York, by Dr. R. L. Waterbury, which seems to have conflicted with the views of the savans of that illustrious body, consisting of Messrs. Mapes, Waring, *et id omne genus*, who undertook to answer it. On reading the report of their remarks, Dr. W. found it necessary to disclaim the views attributed to him, and in doing so gives the purport of the paper read by him as follows:—

That without the use of any foreign fertilizer, produce enough may be sold off from a farm in most portions of the Union to pay the expense of conducting it; and yet, by judicious management, the soil may be annually improving in condition;

That this can be effected easiest in those portions of the Union where the value of land is the least, and where, consequently, the farms are largest, and the longest rotations of crops can be profitably resorted to;

That no system of farming is deserving of our attention that does not recognize the necessity of farm exports;

That a State may, to some extent, export agricultural products, without diminishing in capability to produce them;

That an inspection of the census returns of the United States and of the State of New York, shows that the amount of crops of this State has increased for the last ten years much faster than the area of improved lands in the State, and that consequently the lands cannot be "running out;"

That the processes of Nature, to which we owe the present alluvia condition of the surface of the earth, are still at work, and that land left entirely to itself will, by the action of water and vegetation, improve in fertility;

That the process of tillage alone may be made to accelerate this improvement, and help to provide for the necessary waste of marketing;

That rain penetrates the porous parts of the earth's surface, and percolates through them until it comes to impervious strata, and that it runs along this impervious strata until it finds egress as springs, and that spring water is impregnated, more or less, with saline substances;

That the evaporation which is continually going

on of the water from the surface of the earth, leaves the saline matter in the surface, as but a small part of the water that falls as rain ever reaches the sea;

That the mineral springs of Saratoga and other localities, are exaggerated illustrations of this process, and the more fertile conditions of valleys is to be in part referred to the same cause;

That, in the present thinly populated condition of our Continent, the true purpose of American agriculture at this time is to wisely direct these natural forces, rather than apply pinches of guano and tea-spoonfuls of super-phosphates to individual plants, although such applications may pay on some farms, and probably do pay well on all *market gardening* operations.

The objection to soil analysis is this:—

The difference between the early soil of Virginia and the same soil in its present condition, has been made by the loss of 1,200 lbs. of alkalis to the acre. But this 1,200 lbs. forms not quite three ten-thousandths (000.27) of the soil to the depth of a foot.

The idea that any amount of variation within such infinitesimal limits can be measured and defined by *quantitative analysis*, is absurd. Top-dressing of the same amount would, in the same way, fail of being detected.

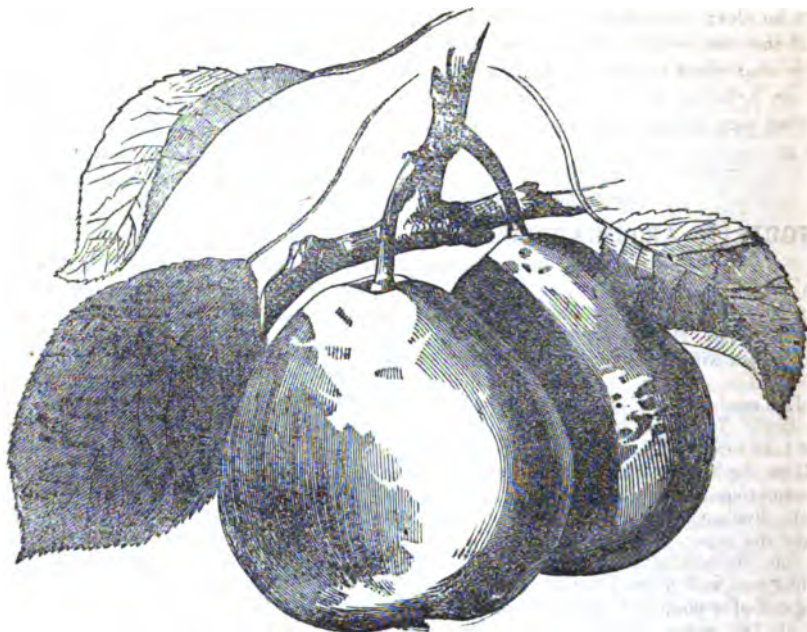
That directions given by agricultural chemists have led to successful results, is undoubtedly true; but these directions have been founded rather upon experience and observation than upon chemical analysis.

A GARDEN.

Not wholly in the busy world, nor quite
Beyond it, blooms the garden that I love.
News from the humming city comes to it
In sound of funeral or of marriage bells;
And, sitting muffled in dark leaves, you hear
The windy clanging of the minster clock;
Although between it and the garden lies
A league of grass, washed by a slow, broad stream,
That stirred with languid pulses of the oar,
Waves all its lazy lilies, and creeps on,
Barge-laden, to three arches of a bridge
Crowned with the minster-towers.

TENNISON.

ROSSE'S TELESCOPE.—The Earl of Rosse, who has recently completed another telescope, the largest ever made, alluded, at a meeting in London, to its effects. He said that, with respect to the moon, every object on its surface of 100 feet in height was now distinctly to be seen; and he had no doubt that, under very favorable circumstances, it would be so with objects sixty feet in height. On its surface were craters of extinct volcanoes, rocks, and masses of stones, almost innumerable. He had no doubt that if such a building as he was then in were upon the surface of the moon, it would be rendered distinctly visible by these instruments. But there were no signs of habitations such as ours—no vestiges of architecture remain to show that the moon is or ever was inhabited by a race of mortals similar to ourselves. It presented no appearance which could lead to the supposition that it contained anything like the green fields and the lovely verdure of this beautiful world of ours.—There was no water visible—not a sea or a river, or even the measure of a reservoir for supplying town or factory—all seemed desolate.



THE SECKEL PEAR.

The fruit from which the above portraits were taken, was from the garden of the Messrs. J. F. C. HYDE, of Newton Centre. We cannot do better than give Mr. Downing's description of it. He says—"We do not hesitate to pronounce this American pear the richest and most exquisitely flavored variety known. In its highly concentrated, spicy, and honied flavor, it is not surpassed, nor indeed equalled, by any European variety. When we add to this, that the tree is the healthiest and hardiest of all pear trees, forming a fine, compact, symmetrical head, and bearing regular and abundant crops in clusters at the ends of the branches, it is easy to see that we consider no garden complete without it. Indeed, we think it indispensable in the smallest garden. The stout, short-jointed olive-colored wood distinguishes this variety, as well as the peculiar reddish-brown color of the fruit. The soil should receive a top-dressing of manure frequently, when the size of the pear is an object. The Seckel pear originated on the farm of Mr. Seckel, about four miles from Philadelphia. It was sent to Europe by the late Dr. Hosack, in 1819, and the fruit was pronounced by the London Horticultural Society, exceeding in flavor the richest of their autumn pears.

Fruit small, (except in rich soils,) regularly formed, obovate. Skin brownish-green at first, be-

coming dull yellowish-brown, with a lively russet red cheek. Stalk half to three-fourths of an inch long, slightly curved, and set in a trifling depression. Calyx small, and placed in a basin scarcely at all sunk. Flesh whitish, buttery, very juicy and melting, with a peculiarly rich, spicy flavor and aroma. It ripens gradually in the house, from the end of August to the last of October.

ESSEX COUNTY.—We are pleased to learn that the late Dr. JOHN G. TREADWELL, who recently died in Salem, has by legacy left the Essex County Agricultural Society a farm of seventy acres in the town of Topsfield, to be used as an experimental farm. Blessings will rest on the memory of the man. Why has not a similar bequeathment long before this been made in old Middlesex? If men understood better what would perpetuate their good name, they would often give their philanthropy a different direction.

SOAP.—Some one has sent us a glowing description of this article, from which we are almost led to believe that it would wash the skin of an Ethiopian, white. He says some female has written for our columns, who has been experimenting with soap, and has found borax mixed with it very economical. He desires her to try *his* soap—well, we

are willing she should,—but until we try it ourselves, can neither vouch for his declarations, nor add any experiments of our own. We have a high regard for clean linen, and for the “ladies hands,” too; if they are honestly soft, so much the better. But his soap comes to us too soft, altogether. We must see it, feel it, rub it, lather it, wash with it, before we can say anything more to the women about it.

For the New England Farmer.

INQUIRIES ABOUT APPLE TREES.

New York, Aug. 8th, 1856.

MR. EDITOR:—In a recent visit to my place at Westfield, Mass., I saw a number of your work, entitled the *New England Farmer*. I was very much pleased with it, and read every chapter with interest. The chapter on *Lawns*, in particular, should be read by every farmer and rural improver of the land. It is a subject in which our farmers do not take near the interest they should. I hope it will be the means of stirring up every one of your numerous readers to the importance of the subject. Enclosed you will find two dollars; please send me the paper.

In this connection I will take the liberty of troubling you with a few questions in regard to the setting out of a couple of orchards on my place. There are two pieces which I intend planting with apple trees, one of which is gravelly land. In setting out some trees last year, in the same kind of ground, we dug holes 3 feet deep and 6 feet across, which we filled with good turf soil and set the trees in it, and in the fall put manure around them a short distance from the body of the tree. Do you think the above a good plan? My object is to force the trees all that is possible. My other piece is meadow land, on which, heretofore, I have first dug holes large enough to admit the roots, but put manure around them same as those on the gravelly land. Do you think I have pursued the best plan with these? I want to set the trees a sufficient distance apart so as not to interfere with the usual farm crops. Last year we put them some 30 and some 40 feet apart; this year we thought of putting them 50 feet apart. Do you think the distance too great? Which do you think is the best season to set trees out, spring or fall, and which the best place to get them from to set out in Westfield climate?

Last year we set our trees out in the fall and got them from Parsons', Flushing, Long Island, and out of 300 trees nearly 40 have died. What age do you think it is best to have the trees? What are the best varieties of winter apples, that is, the most profitable to raise in our soil? I find what I intended for a few inquiries have become a long list, but I hope you will find time to answer them, as many of the farmers in our vicinity would like to have your opinions very much. I am with great respect, your friend,

C. L. INGERSOLL.

REMARKS.—We are always gratified to learn that the subjects discussed in these columns are well received, and are affording suggestions for improvement. Indeed, this assurance, often freely expressed, forms the spring of action with us, and

strengthens and sustains and ennobles the calling in which we are engaged. The money interest of this establishment, to the proprietor, we know to be entirely of secondary consequence, as the income of another branch of industry, already immense, is more than sufficient to gratify any personal ambition of a man self-taught, self-made, and who has the happiness and welfare of the world at heart. The things requisite to supply our own simple wants might well be afforded by the acres we cultivated, and leave us sufficient leisure to gratify the taste in exploring abstruse subjects and treasuring up the lore of the books, did not the promptings of duty impel us to strike while the iron is hot, and impart to the waiting world portions in due season of such as has been committed to our care.

We labor, therefore, with a happy zeal. Our daily walks and conversations with you are all of the most pleasing character. We impart something, but gain a great deal more from you through the aid of your pens and your approbation of our enterprise.

In this spirit we receive and reply to the letter of our correspondent from New York. The chapter on *Lawns* was written by our Associate, Judge FRENCH, a gentleman qualified by observation, reading, and actual experience, to write correctly on the subject. To those who examine his grounds, laid out by his own skill, and prepared mainly with his own hands, no testimony of ours is necessary. His articles are not only written with a graceful ease, and in a most attractive style, but as Burke said of a certain kind of oratory, they go home to men's business and bosoms. They all have a direct practical bearing, which at once pleases all practical men, while the purity, vigor and ease of their style attract the student or scholar.

The inquiries of our correspondent afford us an opportunity to speak once more of our favorite employment, *the cultivation of trees*. There is no branch of husbandry to which we have given so much attention, and none in which we have been more successful. A budded or grafted tree is a fair representation of civilization. It shows, in a degree, the advance of scientific effect, and ministers greatly to the necessities of man. Could we fix the doom of bad spirits beyond the great river, it should be no worse than to banish them to a world without trees! Trees are social, living things. They have a language all their own—they stand between us and the fierce Euroclydon or the burning sun;—amid their branches the birds repose, and cattle quietly ruminate in their grateful shade. They condense atmospheric moisture and renew the springs. But in the date, the almond, the hickory, and numerous other nuts, and in the apple, pear, peach, plum, and a variety of other fruits, they compose a very considerable amount of the food of man. They warm, shelter, and feed

us; they take up, use, and purify the air which has been exhausted of its oxygen by man and the animal kingdom, and give great beauty to the landscape.

By *meadow* land we suppose our correspondent means low land that produces the common upland grasses, such as herds grass and red-top. The prevalent opinion has been for many years that low and rather wet lands were not suitable for apple trees. The late Mr. JAMES BROWN, of West Cambridge, who had extensive orcharding on almost all varieties of land, informed us that the apple trees on his low lands, had for many years produced a better crop than those on the hill lands. They will not flourish long, however, where standing water remains for any considerable time.

On the gravelly land, mulching with hay, fine chips, straw, saw-dust, or fine brush is of great service. The latter affords a fine material, as, while it sufficiently shades the ground to prevent excessive evaporation, it does not prevent the access of light and heat. In the fall it is easily removed from the stem of the tree, so as not to harbor mice, who love to feed on the young and tender bark. After trees have been well manured and dug about, perhaps there is no better material for mulching than a coat of two to four inches of old and fine meadow muck, which should be spread about the tree in a circle of six feet in diameter. Holes to receive the tree which are six feet across, and eighteen inches deep are liberal. On land with a hard pan three feet deep is undoubtedly better, if one can afford it. If manure is mingled with the earth in the holes, it should be well decomposed. If applied after the tree is set, it should be slightly dug under the surface.

We do not think it well to force the tree to an excessively rapid growth; in such case it grows late in the season, so that the wood is not matured, is liable to be broken by the winds or snows, and is more susceptible to the cold. A regular annual growth of from ten to twenty inches on the leading branches is enough.

There is considerable diversity of opinion as to the distance of trees from each other. If too near, the limbs soon meet and obstruct each other, and shut out the sun; and the difficulties of cultivation are increased. On the other hand, if too far apart, in order to get a desirable number of trees, they would cover such an amount of land as few farmers could find manure to enrich or to keep under cultivation.

At 40 feet apart, 27 trees would cover an acre, and 18½ acres would be required for 500 trees. On our small New England farms, where there is usually a lack of manure, the true course is to plant trees at such a distance from each other as will enable the leading branches to meet when the tree comes to maturity; the ground will then be covered, but not densely so, and the whole of it occu-

pied. If at maturity the limbs mingle a little, it is better to shorten them in than to cover a large space by setting the trees farther apart. At 29 feet, we get 51 trees to the acre, and this, in our opinion, is better than to go over more ground by setting them at a greater distance. However, all this may depend on circumstances. If land, and teams to plow are plenty, and manure is abundant, 40 feet apart may not be too much. After trees have been set some fifteen years, the orchard crop should be considered a distinct crop, and the trees must not be robbed of their supplies by corn, potatoes, and especially the small grains. The soil ought to be kept loose, and in good condition, by proper applications of manure. Under such circumstances, the orchard will pay better dividends than banks, railroads or manufacturing stocks usually do.

Opinions vary, also, as to the best time for transplanting apple trees. If we were ready, we should not hesitate to transplant in the autumn; and we are not aware by the condition of any trees which we have observed, that there is any advantage in the spring over the autumn, or vice versa. If the trees are good ones, carefully taken up, and preserved if kept out of the ground long, and then well set, ninety-eight out of a hundred ought to live and grow thrifflly.

We prefer trees grown north of us for transplanting, and those two years from the bud are more certain, under the common management, to live and grow, than those of a greater age.

The Danvers Winter Sweet, Winter Green Sweet, Ladies' Sweet and Russet Sweet, are all good varieties.

HEALTH.

Heaven never granted a richer boon than health; and without it, all other blessings are comparatively valueless. Yet it is often lightly esteemed and carelessly thrown away, and never fully appreciated until it is gone. I have seen the mistress of a splendid mansion, surrounded by every luxury which wealth can command, lying upon her couch, pale and miserable, fretful and unhappy. Within her reach were the most delicate viands and exquisite fruits, yet she could partake of none. Health was no longer hers. She had parted with it for the sake of gratifying her vanity, by wearing thin shoes, to display the beauty of her foot, and now, when consumption was preying upon her, she repented her folly, but it was too late; and though she would willingly give all that she possessed, the priceless treasure could not be recalled. The thin, ghastly-looking gentleman, who reclines in his luxurious easy chair, with his gouty foot upon a pillow, sighs and groans in anguish, and thinks of the many weary nights of pain, when the bed of down and the silken covering could bring him no repose.—How he envies the plough-boy who whistles on the green fields, whose step is elastic, and whose heart is light and gay at his toil, while his sleep is sound and refreshing.

What is wealth to the invalid but a bitter mockery which can yield no happiness. Then prize the rich boon of health, ye who possess it, and lift your hearts in gratitude to God, even though your lot may be one of poverty and toil.

For the New England Farmer.

HOW MUCH EDUCATION FOR THE FARMER?

Sra.—'Tis true that they sent me to college
And thought there was in it no harm,
For they thought that a little more knowledge
Could not injure my work on the farm.

They said, but few would not say it,
That culture, expansion of brain,
Might assist, and perhaps would repay it,
But most surely not injure the grain.

And is there in tones of the matin,
In chemistry, argles, the cone,
Or in botany, Greek or the Latin,
Any milk that will nurture a drone?

I went, and I labored with pleasure,
For culture of mind and of soul;
I returned, and am seeking the treasure
For to clothe and to nourish my whole.

How changed is the home of my childhood,
No shade trees, nor flowers nor lawn,
Nor stream with its grove and its wild-wood,
And the joy of my heart, she is gone.

I long for a farm which has beauty
In nature, improvements in stock,
And a wife in the house, in whose duty
There is happiness, song, and good luck.

What course with a boy would you follow?
Keep him on the farm or at school,
Run the risk of a fool for a scholar,
Or a farmer in spite of a fool?

E. S.

P. S.—If she to my hopes is no sinner,
Whenever you come into town,
You are welcome to call for a dinner,
If your answer's "the pure Simon Brown."

I have prefaced my query somewhat at length, in hopes to draw out from some one the true ideal of a model farmer's home, as well as what kind, and how much education a farmer should have. Small potatoes, muck, the habits of animals, &c., are all very interesting; but is the development of the true wants of our natures, and how we may best satisfy those wants, of less importance, when our true happiness consists only in supplying those wants? But if the all-powerful dollar is to take precedence, then will the subject, as heretofore, be discussed by the fireside, in angry debate, over a few pennies, for some trifling luxury. The idea of a gentleman farmer or a farmer's daughter at a boarding-school, has been ridiculed. Perhaps some one can make it appear, that the farmer's vocation is not inconsistent with true education, refinement in taste and feeling,—that the tones of the piano and the splash of the churn may be made to harmonize, and a singing as well as a scolding wife can make the butter come. Let him who has the idea, write.

Ware, Mass., July, 1856.

REMARKS.—Write yourself. You have touched the right strings,—give us more chords.

Col. DANIEL NEEDHAM will deliver the annual address before the *Windsor County Agricultural Society*, at Woodstock, Vermont, September 25th.

For the New England Farmer.

HAY TIME.

The busiest time in the year. The time when there is not a moment to lose. The days are the longest in the year, but they are not quite long enough. There are no other days when men, and women too, rise so early and so willingly, when all go to their labor so cheerfully. The labor of the early morning, when the mower, with stalwart arm and newly-ground scythe, lays the sweet-scented and dew-loaded grass in straight and even swaths, is the pleasantest labor of the day. Before the beams of the rising sun shoot across the green meadow, he is at his work. The glittering dew-drops sparkle in the first rays of the morning, as they scatter before his keen and steady stroke. The music of his rifle rings clear in the still morning. The air is balmy and bracing. The blackbird and bobolink are whistling by the side of the meadow. The redbreast, perched upon the top of a distant tree, is pouring forth his full, clear notes, and all nature seems just waking into new life. But hark! the housewife has been busy at her task, and the shrill horn summons the mowers to their morning meal. The fragrant coffee, the golden Johnny cake, the sweet butter, the substantial bacon or cold beef, and then to wind off, a plate of muffins or a milk-toast, constitute the morning repast. The mower's breakfast is no light affair. For two hours he has been using his full strength. His muscles have had free play. He has drawn without stint, upon the powers of his system, and now he must have a new supply of that which is to give him strength for the remaining labors of the day. Breakfast over, he returns to the field, and is soon followed by the boys, who, with fork in hand, scatter the swaths evenly over the surface of the meadow. Ten o'clock has now arrived, and the dew has dried up. The hay that was cut the day before and left in the cock, must be spread. So the scythe is hung on a tree, and the mowing for the morning is over. The haymaker seizes his fork, and shakes out the cocks of hay, laying it up lightly to the sun and air. Having completed this, he is ready for the luncheon which his careful wife has sent him, and taking his seat upon the ground under the shade of the tree upon which his scythe is hung, he uncovers the basket, and calling the boys, they partake of the coffee, and doughnuts and cheese, and apple-pie, with which it is filled.

Now, boys, we must turn the hay. Shake it well up to the sun, for we must get it into the barn immediately after dinner. When this is all nicely done, they shake up again the thickest of the swaths, which were cut in the morning. And now the sun has reached the meridian, and the youngest boy goes to the pasture for the oxen, and the eldest, taking the scythe from the tree, goes to the house with his father. Dinner is nearly ready, but there is no time to be lost. So while they are waiting for dinner to be put on the table, and the boy to come from the pasture with the oxen, they take a pail of water and go to the grindstone, and put a new edge upon the scythe, that it may be ready for use when it is wanted. Now dinner is ready, and they take their seats at the well-spread table, with appetites none the worse for the luncheon in the field.

Haymakers do not live to eat, but they eat to live and work, and they do both with a hearty

good will. Having satisfied their wants, they rest a few moments, and then, Come, boys, we've no time to lose. So the boys yoke up the oxen, and take the cart with the rakes, and return to the field. The father is there before them, raking the cocks of hay, which have been spread into tumbles, that they may be ready to load upon the cart. Soon they are all ready; and now the oldest boy gets into the cart, and the youngest takes the rake, and the father pitches the hay on to the load. It is busy work. You must rake clean, my boy. Fly around, fly around, make clean work after the cart, if you would not be called a sloven. We have now got on twenty tumbles; that is enough, we will take the rest next time. Now let me take the rake, and brush down the load. There, that will do. Now put up the bars, after I drive the load out of the field.

And now we've got to the barn, and driven the load on to the floor; and, boys, we will have a drink of that nice hop beer which mother brewed yesterday, before we unload. This unloading hay is warm work, in a hot day. It will make the juice run out of a man or boy, if he has got any in him; but it must be done. So, boys, both go on to the mow. Well, the hay is off in less time than it took to put it on; and now for another drink of beer. Now for the other load. This is soon tumbled up, and pitched on to the cart. The oldest boy is now sent up to the barn with the load, with directions to leave it on the floor, and unyoke the oxen and leave them in the yard, and return to the field. They now set to work to rake up the hay that was cut in the morning, and put it into cocks to keep it from the dew. This work they diligently pursue, till the cocks are all standing in rows, of uniform size, and neatly trimmed. And now the father takes down the scythe, and, as the sun is declining, and the dew begins to fall, and a refreshing coolness pervades the air, he gives full play to his muscles, and swings his scythe with a vigorous arm. It is newly-ground, and the edge is keen. He reaches well forward, and rapidly falls the grass before him.

One of the boys drives the oxen to the pasture, and drives home the cows, with full udders, the milk streaming from their teats. The other boy goes into the garden with his basket, and digs a peck of potatoes, and gathers a parcel of cucumbers from the vines. When the cows reach their yard, the boys take the bright pails from the bench by the door, and engage in their evening task of milking them. The milk runs in copious streams, and the rich froth foams up in the pails, while the cows, happy to be relieved, quietly chew the cud. And now the sun is going down behind the hill, and the dewy air is filled with fragrance. The swallows are twittering in their nests under the eaves of the barn, and the chickens are gathering to their roosts. The pigs are grunting their satisfaction over the full pail of skimmed milk in the trough, and the turkeys are lazily mounting to their resting-place on the roof of the shed.

The day's work is done. Father has come from the meadow, and goes to the pump, and laying aside his hat, and rolling up his shirt sleeves, applies freely the clear, cold water to his arms, and head, and neck, and feet. The boys had washed up bright and clean before him. Supper is ready, and mother is waiting for them, with a cheerful smile. The hot biscuit, the sweet butter, the rich

cheese, the apple-pie, the cup of tea or the mug of warm milk, compose the meal. They deliberately satisfy their appetites, and talk over the labor of the day, and the plans for to-morrow. And now, boys, I think you are tired enough to go to bed. Remember, you must be up early in the morning, and milk the cows, and pitch off that load of hay before breakfast. There is no time to be lost.

There, Mr. Editor, there is a day's work in hay-time, when you and I were boys on the old farm at home. Does it not remind you of the good old times, before mowing-machines and horse-rakes were invented? Those were busy days. We expected to work hard while they lasted. We had not heard of the ten hour system then. Both master and hired man expected to work as long as daylight lasted. Work was done in those days by strong arms and brave hearts; and nobody thought of giving out till the hay from the upland was all in the barn, and the hay from the meadow was neatly stacked. We worked hard, to be sure, but it was cheerful, pleasant work. Does not your heart leap with pleasure when you think of those times? We were full of life, and ambitious to show ourselves men. If we did not take so wide a raking as the men, we took care to keep out of their way. We did not carry so wide a swath, but we pointed out well, and cut clean, and took good care of our heels. I remember the first scythe I ever had. I was about 16, and as puny a lad as you would wish to see. But I wanted a scythe. So I walked four miles to a store where they had a good assortment of them, and picked out one that I liked. It was but about three feet long, and I got a light snath to go with it, and then went to a grindstone that was turned by water, and got it ground. I then had it nicely hung, so that it balanced just right, and got me a new rifle that exactly fitted my hand, and then I was a man, every inch of me. I had learned how to whet a scythe, and I took especial care to keep it sharp. I soon got a knack of swinging it easily, without a great outlay of strength, for this I had not, so I made up for want of strength by sleight of hand.

Many a bright morning have I gone into the field, and led off three or four men, with long scythes and brawny arms, and if my swath was but half as wide as theirs, I always came out ahead. And here let me say, if you would make a boy love his work, always furnish him with a good tool, which he can call his own, and teach him how to use it.

I love to think of those old times. It makes me feel young again. I love to think of the men and boys with whom I worked, and of the fields, where we worked, and the maples by the border of the meadow, and the old oak under whose shadow we used to take our luncheon. They were busy times, but happy times, those old hay times. R.

HYDROPATHY APPLIED TO SWARMING BEES.—

Dr. Robinson, of Farmington, N. Y., informs us that he succeeded perfectly with a hive of bees that persisted in collecting in thick masses outside the hive and doing nothing. He bored a hole through the top, which happened, as he wished, to strike the space between the combs. He then fitted a small hive above the old one, and standing at a respectful distance, with a syringe in his hands, continued to shoot the bees with a delicate broadside of cold water. They soon retreated to the interior, and as-

cending through the holes, occupied the new hive above. They immediately went to work to fill it, and in about five weeks it was found to contain twenty pounds of honey. Another person had accomplished the same purpose by covering the top with fresh branches of trees, and then imitating a shower of rain by drenching these branches with a watering pot.—*Country Gentleman.*

NATIONAL AND STATE SHOWS FOR 1856.

American Pomological Society.....	Rochester, Sept. 24.
Canada East.....	Three Rivers, Sept. 16, 17, 18.
Canada West.....	Kingston, Sept. 23, 24, 25, 26.
Connecticut.....	New Haven, Oct. 7, 8, 9, 10.
Georgia.....	Atlanta, Oct. 20, 21, 22, 23.
Illinois.....	Alton, Sept. 30, Oct. 1, 2, 3.
Indiana.....	Indianapolis, Oct. 20, 21, 22, 23.
Maine.....	Oct. 24, 29, 30, 31.
Michigan.....	Detroit, Sept. 30, Oct. 1, 2, 3.
New Hampshire.....	Oct. 5, 9, 10.
New Jersey.....	Newark, Sept. 10, 11, 12.
New York.....	Watertown, Sept. 30, Oct. 1, 2, 3.
North Carolina.....	Raleigh, Oct. 14, 15, 16, 17.
Ohio.....	Cleveland, Sept. 23, 24, 25, 26.
Pennsylvania.....	Pittsburg, Sept. 30.
South Carolina.....	Columbia, Nov. 11, 12, 13, 14.
U. States Agricultural Society.....	Philadelphia, Oct. 7, 8, 9, 10.
Wisconsin.....	Millwaukee, Oct. 8, 9, 10.

COUNTY SHOWS IN MASSACHUSETTS.

Barnstable.....	Barnstable, Oct. 7, 8.
Berkshire.....	Pittsfield, Oct. 1, 2, 3.
Bristol.....	Fall River, Oct. 1, 2.
Essex.....	Newburyport, Oct. 1, 2.
Franklin.....	Greenfield, Oct. 1, 2.
Hampshire, Franklin and Hampden.....	Northampton, Oct. 7, 8.
Hampshire.....	Amherst, Oct. 9, 10.
Hampton.....	Springfield, Oct. 1, 2, 3.
Housatonic.....	Great Barrington, Sept. 24, 25.
Middlesex.....	Concord, Sept. 30.
Middlesex North.....	Chelmsford, Sept. 17.
Middlesex South.....	Framingham, Sept. 17, 18.
Norfolk.....	Dedham, Sept. 30, Oct. 1.
Plymouth.....	Bridgewater, Sept. 24, 25.
Worcester.....	Worcester, Sept. 21, 25.
Worcester West.....	Barre, Sept. 18.
Worcester North.....	Fitchburg, Sept. 19.
Worcester South.....	Sturbridge, Oct. 1, 2.

For the New England Farmer.

CROPS, &c., IN VERMONT.

MR. EDITOR:—As items of news concerning crops, weather, etc. etc., are interesting to most readers, I thought I would just say a few words respecting such things in this section of our State.

The crops are, as a general thing, promising an abundant yield. Corn, till within a few days, had grown for a few weeks almost beyond all precedent, and the various cereals are in a forward state, and look remarkably well. Potatoes look well and healthy, with no appearance of the rot, that I have heard, but in some gardens have been affected. The hay crop thus far, has been abundant and good, or rather till one week ago on Monday last, when the weather changed from the nicest hay-weather to a very disagreeable "wet spell." It has rained every day for nine days in succession, and with the exception of a few loads that were unfit, there has been no hay got in since the commencement of the "wet term."

Yesterday, (Aug. 11th,) about the time people were just ready to draw in their hay, there came up a shower, which finally ended in hail, that, for so short a period, did great damage. My nearest neighbor, west, has had his crop nearly destroyed. The next one estimates his loss at \$300, and so on, those residing in the narrow track of the storm, losing more or less. Many of our farmers have

done haying, while it will take the majority from three to ten days yet to finish.

There is quite an interest felt here among many of our farmers, in the various methods of improved cultivation, as well as improved implements; but still far too many esteem all improvers as so many subjects for Barnum's Museum, and until there shall be more of an awakening to the subject of truly scientific agriculture, our farmers will be "behind the times." And until more interest is taken in agricultural reading so as to elevate the minds of the "tillers of the soil," for no avocation can be elevated without a real and true expansion of mind, there will be too many of the opinion of "A Farmer's Son"—see *Farmer* of Aug. 9th.

I would ask your correspondent who thinks "cooked turnips" are excellent for stock, if he think the effect on stock, would be the same, as warm biscuit, hot coffee, &c. &c., on the human organization, if so I prefer that my cattle do without them, for *dyspepsia* is not a very agreeable disease to have.

Is it true that a "wet spell" about the time the weevil commence their operations upon wheat, has a tendency to destroy them?

When is the proper time for budding apple trees, and should the buds be taken from scions of this year's growth on trees from which you wish to bud?

PROGRESS.

Glover, Vt., 1856.

REMARKS.—Send the suggestions as you propose. From July to September, apple trees may be budded with success. If very dry in July, postpone till rains come. Use buds from a shoot of the present year's growth.

EXTRACTS AND REPLIES.

COOKED VEGETABLES FOR STOCK—MILLET—LUCERNE—STRAWBERRIES.

Some one through the *Farmer* asks if cooking vegetables will pay. I cooked beets, carrots and turnips and mixed with shorts for my cows last winter, and think it paid well; the milk was much better.

I would like to be informed in regard to millet, the time to cut it, and if lucerne will come up the next spring after sowing, as clover does? When is the proper time to set out strawberries?

Cotuit Port, N. Y., 1856.

D. CHILDS.

REMARKS.—Millet should be cut when just passing out of bloom.

Lucerne is a perennial plant, and will last, under favorable circumstances, some eight or ten years.

Set out strawberries in August or May.

ARTESIAN WELLS.

I would like to inquire through your paper if there are any artesian wells in New England, and if so, in what place? Is there any one acquainted with the business of boring?

Sunderland, 1856.

H. S. W.

PRUNE SCIONS—PLUM SCIONS.

"M. M. J." is informed that the prune scions he inquires for were distributed gratis, and exhausted weeks ago.

PRUNING AND SCRAPING TREES.

What season of the year do you consider the best for scraping and pruning trees? R. S. S.
Derry, N. H., 1856.

REMARKS.—Old apple trees may be carefully dug about, and small branches and twigs, such as may be taken off easily with a pen-knife, cut off, at any time between the first of May and November. The middle of June is considered by distinguished orchardists, as the best time for pruning; after that, the month of October. It cannot, however, be too earnestly urged to cover all wounds, even though they be small ones, with something to protect them from the sun, rain and air. We have known common red paint extensively used, and without any apparent harm. This being a strong paint, resists the elements for many years. Care should be taken that the paint does not touch the edges of the bark. Gum arabic dissolved in alcohol, is, perhaps, the safest and best preservative to use.

HOW TO GET RID OF EMMETS.

MR. FARMER:—Can you, or any of your numerous correspondents inform me how to get rid of emmets, which infest our pantry in swarms. We have never had any until about a month since, when, by some means or other, they got in. We have tried all manner of ways to exterminate them, without success. L. S.

South Abington, Aug., 1856.

REMARKS.—Wet a large sponge in sugar-water, and lay it on the shelf; when it is filled with ants, drop it into cold water, and drown them. If put into hot water, the ants are killed in the sponge, and occasion much trouble in removing them.

MIXING OF PLANTS.

There is but one way in which vegetable or animal hybrids are produced. Corn will mix when the pollen of one variety falls on, or rather around the silk of another, and not otherwise. Beans and potatoes will mix when made to blossom in close proximity, but the mixing will be in the seeds, and not in the roots; a red tuber will no more become white, because a white one is planted in the same field, than a red cow will become white, if a white one graze in the same pasture.

A friend had two kinds of potatoes, red and white, which had been planted together till the "memory of man ran not to the contrary." The white variety had much the pleasantest flavor, but he assured me that they could not be separated, for when he planted white ones alone, still the product was red and white as before. I picked out a few of the white tubers, planted them carefully by themselves, and when I dug them found white ones only. I saved the balls, planted the seeds, and still had the same variety unmixed, unchanged, except they were of more vigorous growth. They are an excellent variety, and my family would not willingly part with them.

By the way, I have another variety; they are long, a little curved, very smooth, olive colored, one end a little larger than the other, and when of full growth, weigh one-half lb.; when eaten warm,

they are soft, and of excellent flavor. Are they State of Maine potatoes? CHARLES COOK.
Blackstone, Mass., Aug. 1st, 1856.

IS AMMONIA A FERTILIZER?

MR. EDITOR:—Judging from the writings of agriculturists, it would seem to be a well ascertained fact that ammonia is the principal fertilizing agent of manures. The subscriber having never met with the proofs of this fact, you would confer a favor upon him, and perhaps upon others, by giving a statement of them in your valuable paper. A. W.
Stephentown, N. Y., 1856.

REMARKS.—The "proofs of this fact," probably, may be found in every load of dung that is used. It is stated by all chemists, we believe, that ammonia is one of the most valuable fertilizing substances contained in farm-yard manure, and it is usually present in greater proportion in the liquid than in the solid contents of the farm-yard. We have many particular instances of its efficacy before us in the books. A case is mentioned of a field in England being manured for wheat, in part with ordinary farm-yard manure, and in part with one hundred and fifty pounds of sulphate of ammonia, costing \$5 50—when the produce of the manure was 24 bushels, and that of the ammonia, 33 bushels per imperial acre. Seeds steeped in the salts of ammonia, have been hastened in germination, and in the after luxuriance of the crop. In one experiment, seeds of wheat, steeped in the sulphate of ammonia on the 5th of July, had, by the 10th of August, tillered into nine, ten, and eleven stems of nearly equal vigor, while unprepared seed had not tillered into more than two, three or four stems. In Upper India sal ammoniac is prepared by heating together camel's dung and sea-salt, and is used for plants, and for the keeping of seeds. Plenty of experiments are detailed in the books, to which we refer "A. W.," such as Liebig, Johnston's Elements, Thaer, Shaw, &c.

THE PLUM AND CURCULIO.

MR. BROWN:—I recently read an in the *Farmer* by J. T. W. upon these subjects which I liked. I last year made a solution of salt, sulphur and urine, which proved a preventive of the curculio slugs. After diluting the mixture with water, I applied it to the trees and young fruit with a syringe, and my fruit was preserved.

THE GROUND CHERRY.

We would inform "O. L. K." that there is nothing particularly remarkable about this fruit, or which should cause a demand of fifty cents each for it. We have only eaten it as a preserve, and in this form found it pleasant.

WHITE FLINT WHEAT.

MR. GEORGE W. MAYNARD, of Berlin, has left with us some fine specimens of this wheat, the product of his farm.

THE BLUEBERRY YEAR.

MR. EDITOR:—The year 1866 will be remembered here, in all coming time, as the blueberry year. Two years ago, large tracts of forest land were burnt over, leaving the ground in many places, fit for the harrow; these lands have since grown up with whortleberry bushes, and they are literally covered with them this season. A bushel a day is an ordinary day's toil for a boy. The berries would command from 8 to 10 cts. per qt. at the first picking, but now they will not bring in Bangor market more than from one to two cts., and no sale at that. I have eight bushels which I bought to-day at the low price of 4 cts. per qt., and they will not pay me the freight on them to Bangor, a distance of 25 miles. What shall I do with them? Will they bring anything dried, in Boston market, next winter? Some one suggests to fill a barrel with them, and again fill with pure water, and then keep them in a cool place, and they will be good for pies, notwithstanding they become sour by fermentation. If so, will they be saleable? I can purchase 50 bushels of the nicest berries that were ever grown for 3 to 4 cts. per qt. Please to give us some information whereby so much of this bounty of our woods may be made to clothe our children, and still dispense a luxury to those far away.

Yours, C. S. WELLS.

Ramon, Penobscot Co., Me., 1866.

MORRILL HORSE.

MR. EDITOR:—I notice in your paper of the 21st inst. an inquiry about the Morrill Horse. Being a subscriber, I thought I would give the desired information.

The Morrill Horse is owned by French Morrill, of Danville, Vt., and kept by him at that place. Mr. Morrill has been the owner of the above horse since he was 3 years old; he is now 13 years old, of a jet black color, and weighs 1226 lbs.

PEDIGREE.

The Morrill Horse is a true descendant of the Justin Morgan and Messenger blood; he was sired by Jannison Horse, Jannison Horse by Young Morgan Bulrush, Young Bulrush by old Bulrush, and old Bulrush by Justin Farrington Horse, Farrington Horse by Vance Horse, and the Vance Horse by the celebrated Messenger Horse, an imported horse.

The Morrill Horse is probably the best stock horse for all work that can be found in New England; his stock has proved well and sells very high.

Danville, Vt., July 28th, 1859. A. M. W.

CROPS IN ILLINOIS.

The July number of the *Farmer* has reached our prairie home as usual—we found it full of interest and encouragement for the farmer, perhaps more so to me, it being published in my own native State. We are now in our wheat harvest, which is excellent. Henry Co., as usual, will turn out a large surplus. Corn is growing on at a gallop speed, and bids fair to fill the granaries again to the brim. I wish I could induce some 50 or 100 young farmers from New England to come out here and occupy the thousands of acres now in view lying uncultivated within 3 or 5 miles from the great thoroughfare to the Atlantic. D. STEBBINS.

Burns, Henry Co., Illinois, July, 1856.

BOYS' DEPARTMENT.

SIT UPRIGHT.

"Sit upright! sit upright, my son!" said a lady to her son, George, who had formed a wretched habit of bending whenever he sat down to read. His mother had told him that he could not breathe right unless he sat upright. But it was no use; bend over he would, it spite of all his mother could say.

"Sit upright, Master George!" cried his teacher, as George bent over his copy book at school. "I. you don't sit upright, like Master Charles, you will ruin your health, and possibly die of consumption."

This started Master George. He did not want to die, and he felt alarmed. So after school he said to his teacher:—

"Please, sir, explain to me how bending over when I sit can cause me to have the consumption?"

"That I will, George," replied his teacher, with a cordial smile. "There is an element in the air called oxygen, which is necessary to make your blood circulate, and to help it purify itself by throwing off what is called its carbon. When you stoop you cannot take in a sufficient quantity of air to accomplish these purposes; hence, the blood remains bad, and the air cells in your lungs inflame. The cough comes on. Next the lungs ulcerate, and then you die. Give the lungs room to inspire plenty of air, and you will not be injured by study. Do you understand the matter now, George?"

"I think I do, sir, and I will try to sit upright hereafter," said George.

A TURKISH SCHOOL.—What a picture it was! On the cushioned divan, which ran along one side of the room, sat three venerable-looking Imaums, in flowing robes, long beards, white turbans, and with *chibouque*. On their right and left, upon the divan, were seated a dozen boys, of ages varying from six to twelve, whose dress marked them of high rank. In a conspicuous position among these was a tiny boy, about four years old. He wore a little coat of crimson velvet embroidered in gold; trousers and vest to match; a leather band, richly worked, round his waist, from which hung a tiny sword. On his head a velvet fez, beautifully embroidered, with a heavy gold tassel, completed his attire. On a small desk before the Imaums were several large books in the Turkish language. One was lying open. Below the divan were rows of little Turks all dressed alike, in the coat and trousers and crimson cloth fez. They sat in rows on the floor, like an English infant school, and their little red caps made them look in the distance, like a bed of poppies. Truth to say, they behaved a great deal better than the same number of little Britons would have done. Our entrance attracted their attention. Only for an instant they gave us a look, then settled themselves again. And now, one Imaum called up one boy after another to read a sentence out of the great book; when he had finished his sentence all the school cried out "Amen." At length, the little boy whose dress we have described descended from his seat, and stood at the Imaum's feet, then slowly repeated each word after the Imaum. He accomplished a sentence; a very loud "Amen!" followed, and there was a buzz and a smile on every one's face, as if some feat had been

accomplished. The child returned to his place, and the other boys went up in turns for their lesson.

EIGHTEEN THINGS

In which young people render themselves very impolite:—

1. Loud laughter.
2. Reading while others are talking.
3. Cutting finger-nails in company.
4. Leaving meeting before it is closed.
5. Whispering in company.
6. Gazing at strangers.
7. Leaving a stranger without a seat.
8. A want of reverence for superiors.
9. Reading aloud in company without being asked.
10. Receiving a present without some manifestation of gratitude.
11. Making yourself the topic of conversation.
12. Laughing at the mistakes of others.
13. Joking others in company.
14. Correcting older persons than yourself, especially parents.
15. To commence talking before others are through.
16. Answering questions when put to others.
17. Commencing to eat as soon as you get to the table. And—
18. In not listening to what one is saying, in company—unless you desire to show open contempt for the speaker.

A well bred person will not make an observation whilst another of the company is addressing himself to it.

LADIES' DEPARTMENT.

FEMALE BEAUTY.

Dean Swift proposed to tax female beauty, and leave every lady to rate her own charms. He said the tax would be cheerfully paid and very productive.

Fontenelle thus daintily compliments the sex, when he compares women and clocks—the latter serve to point out the hours, the former to make us forget them.

The standards of beauty in woman vary with those of taste. Socrates called beauty a short-lived tyranny; Plato, a privilege of nature; Theophrastus, a silent cheat; Theocritus, a delightful prejudice; Carneades, a solitary kingdom; and Aristotle affirmed that it was better than all the letters of recommendation in the world.

With the Modern Greeks, and other nations on the shores of the Mediterranean, corpulency is the perfection of form of women; and these very attributes which disgust the Western European, form the attractions of an Oriental fair. It was from the common and admired shape of his countrywomen, that Rubens, in his pictures, delights so much in a vulgar and odious plumpness; when his master was desirous to represent the "beautiful," he had no idea of beauty under two hundred weight. His very graces are all fat. But it should be remembered that all his models were Dutch women. The hair is a beautiful ornament of women, but it has always been a disputed point which color

most becomes it. We account red hair an abomination; but in the time of Elizabeth it found admirers and was in fashion. Mary of Scotland, though she had exquisite hair of her own, wore red fronts. Cleopatra was red-haired; and the Venetian ladies to this day counterfeit yellow hair.

After all that may be said or sung about it, beauty is an undeniable fact, and its endowment not to be disparaged. Sidney Smith gives some good advice on the subject. "Never teach false morality. How exquisitely absurd to teach a girl that beauty is of no value, dress of no use! Beauty is of value—her whole prospects and happiness in life may often depend upon a new gown, or a becoming bonnet; if she has five grains of common sense she will find this out. The great thing is to teach her their just value, and that there must be something better under the bonnet than a pretty face for real happiness. But never sacrifice truth." —*Salad for the Social.*

DOMESTIC RECEIPTS.

POTTED MEATS.—It sometimes happens to the ladies from some unforeseen circumstances, that large quantities of cooked meats, prepared for a party which did not come off, perhaps, remains on hand, which are measurably lost. Such should be potted. Cut the meat from the bone, and chop fine, and season high with salt, pepper, cloves and cinnamon. Moisten with vinegar, wine, brandy, cider, or Worcestershire sauce, or melted butter, according to the kind of meat, or to suit your own taste. Then pound it tight into a stone jar, and cover over the top with about a quarter of an inch of melted butter. It will keep months, and always afford a ready and excellent dish for the tea-table.

PINE-APPLE JELLY.—Pare and grate the pine-apple, and put into the preserving pan with one pound of fine white sugar to every pound of fruit: stir it and boil it until well mixed, and thicken sufficiently; then strain it, pour it into jars, and when it has become cool, cover the jellies with papers wet with brandy, cover the jars tightly, and treat them as apple jelly.

TO PREVENT JAMS FROM GRAINING.—A correspondent informs us that to prevent jams, preserves, etc., from graining, a teaspoonful of cream of tartar must be added to every gallon of the jam or preserve.

A GOOD WIFE.—In the eighty-fourth year of his age, Dr. Calvin Chapin wrote of his wife: "My domestic enjoyments have been, perhaps, as near perfection as the human condition permits. *She made my home the pleasantest spot on earth to me.* And now that she is gone, my worldly loss is perfect."

How many a poor fellow would be saved from suicide, from the penitentiary and the gallows, every year, had he been blessed with such a wife.

"She made home the pleasantest spot to me on earth." What a grand tribute to that woman's love, and piety, and common sense! Rather different was the testimony of an old man some three years ago, just before he was hung in the Tombs' yard of this city. "I didn't intend to kill my wife, but she was a very aggravating woman." Let each wife inquire, "Which wife am I?" —*Hall's Journal of Health.*



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. VIII.

BOSTON, OCTOBER, 1856.

NO. 10.

JOEL NOURSE, PROPRIETOR
OFFICE.....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

OCTOBER AND ITS SUGGESTIONS.



OCTOBER! Season of soft suns, and mild airs; of falling leaves and ripened crops. Fruition of the year! When gathered harvests swell the barns and fill the cellars, so that there shall be no winter of want or discontent. The early morning sparkles with frost or dew-drops, at noon the sun's rays reach

us delightfully tempered by the hazy atmosphere, and the cool evening, bringing the family around the bright fire, closes the day with charming contrasts. But like the flowers, and a thousand things

near us, the beautiful changes, and the peculiarities they bring, are unregarded by too many.—They are gradual, and the well-tempered mind falls into unison with them, and expands with the pleasing truths they teach.

There are some persons always living in the country, who know little of country life; they forget that

"There's beauty all around our paths, if but our watchful eyes Can trace it midst familiar things, and through their lowly guise."

The grass grows at their feet, but they have only deemed it fit to tread upon, or for the brutes to graze; that it is the basis of all our prosperity, and sustains the world, are facts which have never occupied their thoughts. The tree drops its foliage on the earth, and presents its naked branches to winter storms and winds, yet they have not reflected upon the office of the leaf in perfecting the fruit, or in contributing to their own comfort and health.

The Voices of Nature are peculiar to the months, and change with the seasons, but they regard them not, though they are full of attraction and lessons of wisdom to the observing mind. How many have passed early life near a pine wood, the grand temple of nature, and yet never sat in silent contemplation, amid the ever-returning murmurs among its branches, like the dull, distant sound of marching armies, or mighty ocean-waves washing a trending shore! How many near an ancient forest of oaks, beeches, and chestnuts, peopled with denizens finding every want supplied amid their solitudes,

"Where the sound of dropping nuts is heard, though all the wood is still,

and yet have no proper appreciation of the life and offices of the forest, or of its inhabitants, or of its effect on the imagination and heart. Who see in the forest excellent timber only, for railroad ties or ships, or fuel for the fire! forgetting its effect in the landscape, its wings of shelter, or its indispensable duties as an atmospheric agent. The springs flow on in their joyous course, and they drink and are satisfied, or the hills are parched, the water courses dry, and they famish, yet without pausing to trace the cause of either, and live a listless and unobserving life. Neither the changes of the Seasons, the Voices of Nature, or the suggestions of the living world around them, arrest the attention or inform the mind.

High culture in one department, is quite likely to excite to a higher degree of culture in another. The family which occupies a farm where the fields and fences and the rotation of crops is systematic,—where the hours of labor and of eating and sleeping are regular, will be more likely—as a general thing—to send the children to school, to have a variety of well selected books about the house, and attend to the *culture of the mind*, than the family where order and an economical arrangement of its affairs is neglected. Our habits do not stand alone in their influences; one runs into, and gives tone and coloring to another. It is so in the moral

world. He who habitually violates a *single* moral duty, will scarcely be found true to all others. The careless and indifferent farmer will be likely to introduce his habits and tastes into the household, because they are contagious, and as all the duties of life are so intimately interwoven into each other. And these are the natural suggestions of *October*, because October will faithfully discharge its offices of the seasons, and be true to itself. Such should be our fidelity.

Culture brings refinement of taste and feeling, gives us new and better views of life, and an increased power over the elements, as well as ourselves. But even culture must be tempered by prudence and reason. There may be too high culture in the field for the best good of the plants; there may be too high culture for the intellect, and there is always danger that the appetites may be too highly excited or trained. Even among farmers, engaged in the most healthful occupation, a large amount of the sickness and disease which prevails, we think may be traced to an undue cultivation of the appetites. We are too refined in our diet; our food is not only deprived of certain elements indispensable to health, but it is taken in too concentrated a form. The grains of wheat from which our flour is made, contain, among other things, iron, a certain portion of which is necessary to health, and ought to be taken in the minute quantities in which we should naturally get it in our bread. But by the *cultivated* art of the miller, this is refined away, and consequently, we suffer. This sufficiently illustrates our point.

OCTOBER suggests that all the harvests should be carefully secured;

That cattle should not feed mowing fields very closely;

That Indian hills should be split, and stubble grounds plowed;

That walls may be built or repaired;

That swamps may be reclaimed, wet uplands drained, and stones in fields to be cultivated, sunk below the reach of the plow.

OCTOBER suggests that the gathered apples packed in barrels should not be left exposed to the sun, because they are heated during the day, and suddenly cooled during the frosty nights, thus frequently changing their temperature, and hastening decay;

It suggests that apple trees that were not pruned in June, may be attended to now;

That aqueducts may be laid, water-courses cleaned, cisterns formed, and matters about the house arranged for the comfort and convenience of the women and children.

Lastly, OCTOBER suggests to us all that this month is usually a delightful one in which to visit our friends in adjacent towns or States; not shut up in a railroad car, but drawn by the horses who

have been our friends during the summer's labor; well fed and groomed, they will enjoy it too. The air is pure, cool, and elastic, the scenery attractive and beautiful beyond description, and the roads usually good. Do not, then, deny yourselves of this common means of a higher intellectual and agricultural culture, so that you shall be able to say that you have found more true wisdom in this than in any former month of OCTOBER.

GATHERING CLOVER SEED.

A writer in the *Valley Farmer* gives the following method of collecting clover heads.

"We once made and used for many years, a very simple machine for gathering clover heads, with which a man and horse can go over and gather the seed from double the quantity of land in a day than he can cut over with a scythe; and when the heads only are gathered, they require no other labor, except drying, to prepare them to run through the hulling and cleaning machine. Any tolerable workman can make one of these machines in two days. It is upon the following plan: Make an ordinary sled with sides or runners 14 inches wide and 6 feet 6 inches long. These may be placed 5 or 6 feet apart, and secured together with two cross pieces only at the back end, leaving the forward part open to the length of 3½ or 4 feet; then a box is made to nearly fill the width between the runners. The box is 4 feet long and 15 inches deep, with the forward end open. To the cross pieces at the bottom of the box, at the forward end, teeth of hard wood are secured so as to project about 12 inches; they should be ¾ of an inch thick and 1 inch wide on the top, and made a quarter of an inch narrower or beveling on the underside. These teeth are placed *three-sixteenths* of an inch apart, so as to form a comb. If the upper side of the teeth were capped with hooped-iron, neatly fitted, it would be better. This box is hung between the sides of the sled upon two gudgeons or pins two inches in diameter, just as cannon is hung in its carriage. With two handles, four feet long, secured to the box and projecting behind, the box may be moved on the pins so as to lower or raise the teeth to adapt them to clover of any height. A man with a horse can strip the heads from four or five acres of clover in a day with this machine, and collect it in the box. With one of these machines a farmer can gather as much seed in a day as would be required to seed forty or fifty acres. It needs no hulling or cleaning unless it is designed for market. Some prefer to sow the seed in the chaff to that which is cleaned.

☞ Will some one inform us of the post office address of Mr. HAYWARD, editor of the *Gazetteer of New England*?

☞ Hon. B. Murray, in a letter to the *Prairie Farmer*, published at Chicago, Ill., proposes to be one of 100 subscribers to a fund of \$50,000, to be awarded as a premium for a perfected steam plow suited to farm use, and capable of performing the work at an expense in money not greater than the average cost of performing the same work under the present system.

For the New England Farmer.

EXPERIMENTS IN AGRICULTURE.

MR. EDITOR:—I have read the monthly issues of the *Farmer*, during the past year, with much pleasure, and I trust with profit. With the high tone of morality which has manifested itself through its columns, I have been especially gratified. But with all the fine wrought theories which agricultural books and papers contain, I find it not best, always, to trust them. The farmer, after all, must be an experimenter himself, at least, to some extent. The kind of tillage which suits one locality may not always work well in another. This I have found to be true by experience. Until twenty-one years of age I resided on a farm in the south-western part of Windsor county, Vt., where tolerable crops were raised by shallow plowing. Subsequently, for about fifteen years I was engaged in another calling, after which, I purchased a small farm in Orange county, Vt. Here the soil was of a dark loam, and appeared quite deep, without any *hard pan* underneath. My neighbors mostly practised shallow plowing, but I found by plowing deep, much better crops could be raised. I had been accustomed to seeing potatoes cultivated on land that had been tilled the previous year and become somewhat mellow; here I found they did much the best to plant them on green-sward, the rougher the better, provided they would grow at all.

In 1853, I removed again to Windsor county. Here in attempting to raise potatoes on green-sward my crop was almost a complete failure; the next year I planted on the same ground as the year before, with very good success. I find that shallow plowing produces better crops here, than deep plowing. One of my neighbors who has resided here a number of years, when breaking up his ground, usually cuts the sod only from about four to six inches in depth, and he has sometimes raised thirty bushels of wheat and forty of barley to the acre. Though much in favor of deep plowing where it will answer, I have come to the conclusion that shallow plowing is best adapted to some kinds of soils.

Another item of experience I wish to mention. Last spring I wished to obtain some superphosphate of lime to apply to my wheat ground; and supposing I could manufacture it somewhat cheaper and *quite* as pure as any that I could purchase, I engaged a merchant to procure me two hundred pounds of ground bone when he went to Boston to purchase goods. But he delayed going to the city, until I found I could not prepare it in season; so, having a quantity of bones on hand, I broke into small pieces about fifty pounds, placed them in a tub, saturated them with water, and then poured on ten pounds of sulphuric acid. The next day I poured on ten pounds more of the acid, stirred it often for a fortnight, but somehow or other they didn't dissolve.

As the time for sowing my grain drew nigh, I concluded some other method must be resorted to or I should lose all my labor and money too, that I had expended. So I poured off the liquid, placed the bones in a large kettle with a sufficient quantity of water, with a half bushel of lime, and after boiling them about twenty-four hours, they were nearly all dissolved as fine as the lime. After taking it from the kettle, I stirred in the diluted acid with it, and having mixed the whole with a quantity of

chip manure, spread it on the land. Whether it was of any particular benefit or not, I am not able to say, as the ground was rather too moist when the wheat was sown, and it did not come up well; but the heads of that which did grow were large and well filled. I think the next time I undertake to manufacture superphosphate, *I shall let it alone*. I am inclined to think that farmers, especially those back in the country, instead of sending to the city for concentrated manures, might contrive by saving their liquids, or some other way, to enrich their land equally as well with less expense. The cost of my sulphuric acid was ten cents per pound, and my bone meal, which at last arrived, came to nearly five dollars, but instead of two hundred pounds of ground bone, it was a *barrel* of something, I know not what, but by its smell I conclude it must have come from some *filthy place*.

I ventured to use some of it on my corn, but without any apparent benefit. Bones dissolved in lime applied to land, I think may prove beneficial, and I intend trying it again the coming season.

L. B. PETTENGILL.

Weston, Vt., 1856.

For the New England Farmer.

FATAL DISEASE AMONG HORSES.

DEAR SIR:—The disease of which you speak in the *Farmer* of the 30th ult., is caused (usually,) by cold closing the pores, producing catarrh or influenza, with congestion of the brain, affecting the nervous system, and circulation of blood in the small, or capillary vessels. The remedy is, to restore and equalize the circulation of blood, and open the pores. I use a vegetable deobstruent powder, one tablespoonful on wet oats, (sprinkled on the surface dry, so as to have the aroma taken into the nostrils) three times a day, the animal to be well stabled, and thoroughly blanketed, and the legs bandaged with flannel. Castor oil, or a strong decoction of thoroughwort, (*Eupatorium perfoliatum*) is the proper physic. This course has cured every case, if used before the jaws were set and the animal refused to eat.

The deobstruent powder is a preparation I use in influenza, in the practice of medicine, and is worth \$4 per pound; half a pound is sufficient to cure one horse.

LAWSON LONG, M. D.

Holyoke, Sept., 1856.

NEW HAMPSHIRE STATE HORSE SHOW, AND HILLSBOROUGH COUNTY AGRICULTURAL AND MECHANICAL FAIR.—The Hillsborough County Agricultural Society have determined to hold their annual fair this year in Manchester, on the Fair Field, on Tuesday, Wednesday and Thursday, Sept. 30, and Oct. 1st and 2d, in connection with the Granite State Horse Show, which will be held at the same time, under its auspices.

SNOW-BIRDS IN SUMMER.—Will Mr. Fowler, or some other correspondent, tell me where snow-birds tarry during the summer and rear their young?
Yours,
T. C.

For the New England Farmer.

THINGS IN VERMONT.

MR. EDITOR:—I noticed the article in your paper of Jan. 12, about "Things in New Hampshire," in which your correspondent gives a description of some of the rural districts in that State, and, strange to say, he confounds Vermont, as partaking of the same defects to such a degree, that "whereas Vermont and New Hampshire once supplied the cities with butter and cheese, they now do but little towards it." In respect to the latter State, I have nothing to say. But I think I can prove to your correspondent that Vermont, instead of suffering a decline in the production of butter, cheese and wool, is very rapidly increasing in these products, and many other products of the farm. Any reasonable person who will compare the number of cattle, sheep, &c., which are carried to your city from Vermont, with those of the other New England States, would be at once convinced that this State is yet occupying the front rank in that respect, and consequently if Vermont sends a yearly increasing number of cattle to market, it must be the same also in the amount or quantity of butter and cheese. Why is it that the provision dealers of your good city take so much pride in displaying the sign of "Vermont butter," &c., around the entrance to their sales-room? Does it not denote a superabundance of the article from that State, also superior quality?

The Green Mountain State has ever been fresh with laurels won from the soil, gained by a successful war waged against the thorns and thistles which throughout the whole world rise in opposition to the farmer. Our virgin soil, cultivated by the skilful hand of the Green Mountain boys, has amply repaid them for their labor in supplying our own families with choice vegetables and fat meats, and thousands of others beyond the limits of our State.

The dairy, too, under the supervision of our wives and mothers, assisted by their fair, wise and virtuous daughters, (who unlike the city belles, are not ashamed of labor,) will still continue to pour forth its choice productions, to grace the tables of the city consumers.

As I have visited several of the counties in this State, I will give a description of a few localities, which shall not be selected, but may be taken as a general average throughout the State. Although Vermont has so much good soil of which to boast, yet there are large tracts of excellent land which are not improved.

In the counties of Orleans, Caledonia and Essex, there are several towns which have been settled from fifty to a hundred years, and yet increase so slowly that the best of timbered lands, with soil to match, may be bought for from three to six dollars per acre. These lands, however, are situated in the towns which are a short distance back from the principal business towns, and in those, real estate is, perhaps, as high in value as in New York.

In the town of East Haven, Essex County, are more than ten thousand acres of unimproved land, with a soil adapted to all kinds of grain, and as good for grass as the best old farms in the State. The timber is for the most part "mixed," with hard and soft wood, consisting of spruce, hemlock, maple, beech and birch; But in many sections the timber is nearly all hard wood, mostly large rock maples, together with a few beech and birch.

If the emigrants westward from New England would turn their attention to the unsettled acres in Vermont, they would find them far better than any description yet given, where they would find no fever and ague to shake the possessors from their possessions, and would be, by the assistance of steam, within a day's ride of Boston. These lands of which I have spoken, will soon be in close proximity to the new railroad which is now begun, from St. Johnsbury to Derby Line.

The town of Derby is situated in the north part of Orleans County, extending to Canada Line. It has three villages, the central, north and west. The centre village is a beautiful plain, through which flows the river Clyde, which furnishes an abundant water power. The country through which the Clyde runs is so level that a small milldam, in the town of Charleston, shuts back its waters for the space of six miles. At the centre village in Derby is located Derby Academy, a flourishing institution, largely patronized by the lovers of education.

The scenery around this village is unsurpassed. The beautiful farm buildings everywhere meet the eye, filled with the productions of the rich soil. In the distance rises a range of picturesque mountains, at whose base rest the placid waters of Lake Memphremagog.

In a short time the iron horse will be heard thundering his way along to be hailed with joyful acclamations, which will, undoubtedly, increase the business and beauty of the place, as it has done for other places of a like character. J. P. SMITH.

Derby, 1856.

For the New England Farmer.

THE EFFECTS OF THE LATE HEAVY RAINS UPON FISH.

MR. EDITOR:—Last week my attention was called to the large quantities of fish found dead in our mill ponds at Danvers-port. The dams forming these ponds are thrown across arms of the sea, and are filled with salt water, at every flood tide. In the summer season, salt water fish from the ocean visit these ponds, and remain during the warm season. The heavy rains, that have occurred of late, have filled the ponds with dirty fresh water, and have prevented for some days the opening of the flood-gates, thereby hindering the sea-water from entering the reservoirs, thus causing the destruction of all the strictly salt-water fish and the crustacea. These dead fish are so numerous, as to cause a very unpleasant odor in the vicinity of the ponds. I noticed none but the true salt-water fish suffered in this freshet, such as the Blue Perch, or Conner, Flounder and Menhaden. All the crustacea have perished which came into the pond from the sea, such as the common and horse-shoe Crab, and Lobster. How the minute crustaceous animals, the *Limnoria terebrans*, which feed upon the wood immersed in the pond, and cause so much mischief to the wooden structures erected about the dam, stood effected by this influx of dirty fresh water, I do not know; time will determine. Our hopes are, that they are all destroyed. The eels and minnows did not appear to suffer, and all the shell fish inhabiting the pond escaped. I observed in many places great numbers of one kind of fish, such, for instance, as flounders, in a dense mass, which led me to suppose something like a common sympathy in their distress might have caused them

thus to come together. Whether the freshness of the water, or its turbidness, caused the death of the fish I do not know, but probably both combined.

This rising of the water in our ponds and meadows, at this season of the year, is unusual, and has been severely felt both by animate and inanimate nature. The trees and shrubs around our water courses now begin to exhibit its effects.

Such a succession of heavy rains, as we have lately experienced, was probably seldom known, if ever observed, by that very old and respectable gentleman, "the oldest inhabitant."

Yours, &c., S. P. FOWLER.

Danvers Port, Aug. 16, 1856.

LETTER FROM MR. BROWN.

Hancock, N. H., Aug. 18th, 1856.

DEAR SIR:—From Concord, Mass., to this place by county roads, the distance is fifty miles, and one can scarcely travel through such a distance, over a route of poorer land, or one presenting less inducements to agricultural life. Bordering the road over which we travelled, the soil is thin, and either abounding in uncounted stony or gravelly knolls, or thickly studded with boulders, too large to be removed by cattle, and too gnarly to be reduced to any regular shapes by wedge or powder. In particular locations, however, there are exceptions both to the general charge against the soil and the rocks; for about some of the villages, and along some of the streams, there are oases of originally fertile and now highly cultivated lands. Some of these produce fine crops of corn, wheat, barley and oats, and especially grass, occasionally amounting to three tons per acre of the latter.

In the neighborhood of these lands, there are comfortable farm-houses, painted; commodious barns, sheds, and granaries, good fences, barn-cellars, and a general appearance of thrift and comfort. Here, too, are to be found improved agricultural implements and stock, things rarely attended to where the energies are fully taxed to protect the body against the elements and hunger. It is no use to talk to a man of the rotund and juicy Durham, or of the buttery Alderney with her meek face and silky coat, who hasn't a peck of meal in the chest, and the corn on whose lean and hungry soil looks as though it must be *budded* this year, to enable it to arrive at the common stature of corn next year or the year after! Talk to the mother of the virtues of system, neatness, of the education of her children, and she will tell you that she has done all she could, and point you to the stern and barren fields that refuse to reward their unremitting toils. No wonder the broad West looms up with visions of golden cakes, pails of frothing milk, and pitchers of cream.

It is an incontrovertible fact that there are thousands of acres in Massachusetts, and tens of thou-

sands in New Hampshire, upon which the energies of man should never be wasted. There are acres enough without them. There are acres without original fertility, on mountain tops, or sides, away from streams, or good roads, swept by rains, and scorched by summer suns. They are difficult of access to plow, manure and plant, or if, providentially, a crop is grown, to secure it. To persist in their cultivation is a contest between man and the powers of nature, in which the former will certainly come off second best. It has been going on now between one and two hundred years. The axe and fire has swept the noble forests from the hills, while innumerable crops of rye have taken up the virtues of the virgin soil, to which nothing has been returned. By removing the forests, the springs that ran among the hills have disappeared, and gradually, year after year, the rich, leafy mould has been taken up, until nought but a scanty and innutritious vegetation is left springing from a bleached, thin and inactive soil!

Man, here, is yielding to natural, but inexorable laws. The gloomy records of his defeat are left upon the land. All along the way, occasionally in the valley, sometimes on the narrow plain, but mostly on the bleak hills, stand dreary monuments not only of his *defeat*, but of his *retreat*, also, from the unequal contest. In a brief travel of only one day, stand more than fifty deserted mansions to attest this fact! These are not the tenements of the first settlers, but the re-buildings of their descendants, never to be repeated: one, only, mostly demolished, showing the log structure of the pioneer. Here and there some careful hand has removed the dilapidated frame work, and the cellar only marks the spot of the habitation. In the other cases, no herds stand in their stalls, no smokes curl from their chimneys, and the grass—nature's beautiful covering where man mars—has overspread the pathway to the doors. Owls and bats may enter and enjoy their solitary reign, but man inhabits there no longer, nor ever will. In those deserted rooms no human hearts will again beat with tumultuous pleasure, or anguish and pain; no hopes will flatter,

"No days of toil, or nights of grief,"

be related around the morning board, or in the evening chair.

Though perhaps not strictly applicable to the condition of things around me, I could not help recalling that beautiful, but somewhat melancholy poem of Goldsmith, *The Deserted Village*, and especially the following passage:—

"Princes and lords may flourish and may fade,
A breath can make them, as a breath has made:
But a bold yeomanry, a country's pride,
When once destroyed, can never be supplied."

All around these once fair representatives of civilization, Nature is rapidly making encroach-

ments; and there are unerring tokens of her impending approach. The clang of the anvil has ceased; the mill grinds not, nor saws, and the mountain stream babbles or roars along its unimpeded course. The majesty of State laws compels to a good condition of the public roads, though there are few to travel them. But Nature is on her triumphal march, and trenches upon these as well as the garden and the field. First comes the grass, like the atmosphere, determined that there shall be no vacuum in nature. It covers the fallows of husbandry, the deep cuts made for the avenues of trade; spreads over and obliterates the art or skill of the landscape gardener, and claims a place or even superiority, with the exquisite flowers of the parterre. It is universal. Cattle graze and enjoy it, and minister to the wants of man.

But as the lion reigns supreme in the locality which he has inherited or selected as his cwn, and levels contributions over still wider circles, so there is a power behind the grass which shall not only supplant, but drive it from its realm. The forest approaches. Here and there, where the decaying rock yields up its potash or its lime, fit food for the embryo plant, appears the pine, ash, oak, maple, beech, birch or walnut, and soon assumes the form and comeliness of a tree. Various shrubs mingle with them, whose innumerable leaves extract from the atmosphere its nutritive properties, and these, cast annually, cover and protect the surface and supply nourishment to the roots of all. Forest trees take the lead, and as they gain superiority, the lesser plants yield, laying down their lives—a sort of vegetable martyrdom—for the general good; they were useful in life, and when done with that, still continue to sustain the living growth. Here is a new state of things. Man and his ways have disappeared. Nature has assumed the sway, and again clothed the earth in her primitive dress. The forest is everywhere, covering hill, valley and plain. Silence is in its dark courts, save when the thunder breaks over it, or the tornado prostrates it with its ferocious breath.

Such is the course of Nature—to contend with her is worse than folly, being no less than a sacrifice of health, prosperity and comfort. Let her have these lands, and use them as she will. In thirty years they will be covered with trees fit for timber and fuel, and return a profit to their owners.

In the mean time, if the proprietors of the more level and fertile lands wish to keep the native population at home, they must invite the mountaineers and the cobble-stone-knoll-men into their districts, and give them employment in the numerous manufactories of one kind and another, or divide their rich lands with them for a fair compensation. These lands, under a higher state of cultivation, will produce well nigh as much as the whole do

now, while the products of the forest will be a clear gain; an immense expense of fencing and road-making will be saved, the sparse population will be gathered into more compact communities, taxes of all sorts decreased, and the facilities for the transaction of business and the general welfare and happiness of all greatly promoted. If these things are not regarded, the emigration West will continue until scarcely a type of the original New England stock will be left, and the Shylocks who hold on to the better lands with penurious grip, will find themselves surrounded by those speaking other tongues, and in whose veins runs not a drop of their ancestral blood.

The fiat has gone forth, and puny man cannot check its career. Large portions of Massachusetts soil, and immensely larger of Maine, New Hampshire and Vermont will grow up to forest, in spite of furnaces and locomotives. England has passed through the same process. Even now, some of the old towns of Massachusetts, already settled more than two hundred years, have a great many more acres covered with wood than they had fifty years ago. In the introduction of scientific principles to his fields, the farmer's head now performs much that was once required of his hands. He tills less land, but the cultivation is more systematic and thorough, and when his crops are secured, they are expended with an economy little understood by his predecessors.

Our travelling companion, JACOB B. FARMER, Esq., of Concord, Mass., is a gentleman of rare powers of observation; he confirms the views we have expressed,—states that he has travelled over the various routes we have now taken, more than one hundred and fifty times within forty years, and that he has noticed these desertions of the original homesteads through the whole time,—but that a large majority of them belong to the latter half of that period.

In this stroll among the farmers, we passed through fourteen towns,—eight in Massachusetts and six in N. H. Hancock, from which we date, is generally hilly. On the south and easterly portion there is a comparatively flat tract of several hundred acres of excellent land, much of it free from stones, and producing large crops of good quality grass without manure. It is seldom plowed. Mr. DAVID WOOD, who owns one of the farms occupying this tract, has adopted the English fallowing system on a portion of it, by plowing two or three years in succession, and then seeding down, but with what success, we did not learn. Mr. Wood usually winters some thirty horses, a pair of oxen, and several cows, for all of which the hay is cut. The horses perform no labor, and are kept in good condition, by a half bushel of cut hay, and a quart of meal, corn and oat meal, twice each day.

Out of the 19,000 acres of this town, we should

judge that 13,000 are devoted to pasturage. Mr. Wood owns some six or seven hundred,—a considerable portion being owned by Massachusetts people, whose cattle, principally milch cows, graze here through the summer months, or even until the last of October, in favorable seasons. Capt. JOSIAH STONE owns another of the fine farms comprising this tract; he winters some forty head of cattle, and in his pastures we found about half a dozen heifers, for which we endeavored to effect a change for sundry of the promises to pay by Massachusetts banks; but without effect. He had the eye of an amateur, as well as the hand of a farmer, and intends that the heifers shall grace his own stalls. Some fine colts, also, ran in his pastures, among them a Morgan, which we should be glad to "hold the ribbons over" at some future day. Capt. Stone is a progressive farmer. He found a path for the water, and it comes to house and barn by its own gravity. No manures bleach in the sun, or are drenched by storms, in his yards; cuts hay for horses; believes in the efficacy of science, and the education of children; makes domestic arrangements convenient and comfortable for his wife and daughters, and wears a cheerful countenance and a happy heart generally—all essentials in farm husbandry. The hill portions of this town are mostly devoted to grazing, and afford evidence of the fact that large portions of the lands of the State are fast returning to their primitive condition,—the forest. They are now in the first stage of the process, grazing lands. We look up here to the Grand Monadnock, to which a party of Young America, of both sexes, has just started. We wish them a happy occasion; but the grim cap on the old fellow's head indicates anything rather than sunshine and extended vision.

My letter is already too long. I believe in "short stories." But I shall write again from another halting place. Truly yours, SIMON BROWN.

Joel Nourse, Esq.

THE NEW STEAM-FARMER.

I devoted two days to the examination of the operation of *Boydell's Traction Steam-engine* as a locomotive and tractive power, and have come to the conclusion that it is "a great success." This success is owing to the endless and wide railway attached to the circumference of the wheels, which gives a fulcrum for the lever, and a bearing sufficiently wide to carry a great weight on soft ground, without imbedding in the soil. Hence the avoidance of friction and clogging. We might illustrate this by a sportsman on the mud oozes, whose feet would sink in, and thus render his power unavailable; but by attaching to his feet wide pieces of board, the pressure is diminished to a bearing condition. Thus in the case of Mr. Boydell's machine, although it weighed nine tons, its impress was scarcely perceptible, where a horse's foot left a deep indentation. The engine walked from Camden-town to Acton, taking

in tow its four-wheeled wagon, with coals, and four heavy iron plows, and water enough for four hours' work. When on the soft turnip-field—after a night's rain—it drew after it plows, scarifier, &c., with perfect ease, and then walked home again to Camden-town. It can ascend an acclivity of one in three, which is nearly walking up stairs, our stairs being one in two. It can back, advance or stop instantaneously, the pinion being shifted from the cogs of the driving-wheel; and the power thus suddenly released is carried off by a separate fly-wheel, which may be used for driving threshing-machines, mill-stones, or other purposes. In fact, instead of a farmer sending for and sending back a six horse-power engine and threshing-machine, requiring in each trip four horses, this machine will move itself anywhere—draw the corn to market, bring home manure, and do the cultivation and work of the farm. The machine can turn as easily as a common wagon, and does not mind a deep furrow or a side-hill.—*Abridged from a Letter from Mr. Mechi, of Triptree Hall, in the Journal of the Society of Arts.*

THE CHINESE SUGAR CANE.

A correspondent of the *Traveller* gives the following account of a new species of sugar cane which has been introduced into this country by the Agricultural bureau of the Patent Office:

Have you seen any account of the new variety of sugar cane—the Chinese Sugar Cane—lately introduced to our agriculturists through the Agricultural bureau of the Patent office? If it is worth half what is claimed for it, the plant is a wonder. First, it produces sugar, the juice having from fifteen to twenty-five per cent. of pure saccharine, varying according to the soil and climate. Then as fodder it will yield twenty-five tons to the acre; cattle, horses and hogs devouring stalks and leaves with the greatest avidity. As a green crop it will produce a great mass of vegetable matter to turn in and enrich the soil. As fodder it will produce two crops in a year, or a good growth of it can be grown for stock by sowing after wheat or other crops have been harvested. It is equally good for cattle and horses dry or green. The juice can be made into a most delicate drink that can scarcely be distinguished from champagne wine. I've not done with it yet. That same juice—set with alum—will color silk a beautiful red. One thing more; after that, taking the leaves to feed stock, the roots to manure the land, and the juice to make sugar, champagne or coloring matter, the refuse of the crushed stalks can be manufactured into an elegant article of paper.

The tops, when cleaned of the seed, make capital brooms, and the seed itself, ground into meal or fed whole, will fatten any kind of stock, from chickens up to elephants.

There! If that is not a catalogue of virtues for one plant, that you can appreciate and admire, then I must say you do not deserve the gifts of Ceres or Pomona, or any of "the goods the gods provide." There is an acre or so of this cane growing here at Washington, on Uncle Sam's own land, near the Capitol, and a prettier sight in a farmer's field cannot be found. It looks something like corn, tall, graceful stalks, and long taper leaves.

One great advantage is, that it will grow in all climates of the Union, from Tampa Bay to Canada.

Another advantage is, that it can be propagated from the seed, as it will ripen all over the Union; while the Louisiana cane has to be propagated by cuttings, taking twenty per cent. of the stalks of the entire crop for the next year's growth. As in the case of all plants propagated by cuttings, there is a constant deterioration, so that in many parts of the South the growth of cane is not over two-thirds as much as it was some years ago, and that on equally fertile soil.

I send you some papers of the seed. This came from China, and was first obtained by a traveller,

and tried at the Cape of Good Hope, and then in Europe. China covers about the same parallels of latitude of this country, and sugar is made from this cane in all parts of the empire. Plant this seed, some of it now, and see how large a growth you will get by October. Of course it is pretty late for this year. Enough has been distributed over the country to give it a trial, and in a year or two we shall know more of it. Last year a man in Georgia tried some of it, and being asked how it turned out: "Really," said he, "I can't tell, for it was so good my children and the niggers eat it all up!"



MORGAN HORSE, VERMONT.

Above we give the portrait of VERMONT, a splendid Morgan horse, owned by J. H. Peters & Co., of Bradford, Vt. He is a descendant of the old Gifford and Green Mountain Morgan, and has received the first premium at the Vermont State Fair, and it is claimed on the part of his owners that he possesses the celebrated Morgan blood in greater purity than any other horse now living. His color is dark chestnut. He is fourteen hands three inches high, weighs 1000 pounds, and is six years old this season.

THE WALNUT.—The Walnut was originally in England called the Gaulnut, having been introduced from France. Herbalists used to consider the walnut efficacious in diseases of the head, because it bore what they called the *signature* of the head (i. e., a fancied resemblance;) the outer green skin representing the pericranium, the shell within, the skull, and the kernel the brain. Towards the close of the sixteenth century, walnuts were found more effective than cannon balls in the city. Amiens was besieged by the Spaniards, who were then in arms to oppose the accession of Henri Quatre to the throne of France. A small number of Spanish soldiers, disguised as French peasants, with a cart

laden with sacks of walnuts, came to the gate, and asked admittance to sell their walnuts. On the gate being opened for them, one of the sacks which was purposely left untied, fell (as designed) from the cart, and the French guard, busying themselves in picking up the scattered walnuts, were attacked by the disguised soldiers; then a party of Spaniards, who were at hand in ambush, rushed forward, surprised and took the town.

THE CALIFORNIA FARMER.—This paper is a fair type of Young America. Born and nurtured in that young State where the trees grow up through the clouds,—and how much farther we have not been up to see,—it has got to be a young Hercules even in its "teens." And yet strong as it is, its great heart beats in deep sympathy with the suffering and distressed. We advise the returned Californian, if he wishes to learn of the land where he gathered his gold, or where he "saw the elephant," to subscribe for the *California Farmer*.

THE OHIO VALLEY FARMER is a new paper published at Cincinnati, by B. F. SANDFORD, Esq. Number four is before us, and is filled with useful matter, well printed.

For the New England Farmer.

PASTURE GRASSES.

The subject of improving our pastures is receiving much attention, and is one well deserving of much more consideration than it has yet received. In our natural pastures, from four to six acres are required for the pasturage of one cow. In pastures properly prepared, half this number of acres is found sufficient. Indeed, many instances may be named, in which one acre has yielded an ample supply to a cow for five months. But most of our pasture lands are of such a character, that we can never hope to reach this standard. Land that will feed one cow per acre, will yield from one to two tons of good hay, worth from twelve to twenty dollars. This is too expensive pasturage. The land is worth more for hay or other crops. Some years ago, I pastured a cow upon an acre of intervalle land, and she did well. But the land would have yielded a ton and a half of good hay, worth fifteen dollars standing. Cows were pastured in the vicinity for 7 or 8 dollars per year. This was not good economy. It was merely a matter of convenience. But if our pasture lands can be made to yield double the amount of feed they now do, the advantage must be too obvious to need a word of comment. Our native pastures contain from twenty to forty kinds of plants. Many of them are little better than worthless weeds. Some of them contain so much bitter extractive matter, that cattle will not eat them. Others are so dry and tough that cattle will not eat them, so long as they can find anything green and succulent. These various grasses arrive at maturity at different seasons of the year. This is a circumstance of great importance—and shows the necessity of having a variety of grasses in a pasture that is to be fed during the whole season. Some grasses, as the meadow foxtail, the orchard grass, the meadow fescue, the herds grass, the sweet vernal grass, and the brome, put forth early and are productive in May and June. Others, as the oat grass, the dog-tail, the various meadow grasses, and red and white clovers, and the smooth fescue, yield most feed in the summer months. The various bent grasses, the wheat grass, the birds foot clover, and some others, are green and vigorous in the autumn. By a mixture of these various grasses, a green and tender herbage is furnished through the season. This is seldom or never done in artificial pastures, where but two or three kinds of grass are sowed. The various grasses and plants on which cattle feed, possess very different properties. Some contribute more to the production of fat. Others yield more milk, while others furnish in larger quantity the bone-making materials. Others again have properties by which they affect the various glands of the body. Some promote the secretion of urine, others the bile, others the saliva. When obtained in due proportion, they promote the health and vigor of the animal. The finest natural pastures contain about twenty kinds of valuable grasses, some one or more of which is in a green and thriving state every month in the season, from early spring till late in the fall. The spring grasses are, the *Alopecurus Pratensis*, (meadow foxtail,) *Phleum Pratense*, (meadow cat's tail or herds grass,) *Anthoxanthum Odorato*, (sweet vernal grass,) *Dactylis Glomerata*, (orchard grass,) *Festuca Pratense*, (meadow fescue,) *Holcus Avenaceus*, (tall oat grass,) *Solium Perenne*, (rye

grass,) *Bromus Arvensis*, (field brome,) and the *Poa Annua*, (annual meadow grass.)

The summer grasses are, the *Cynosurus Cristatus*, (crested dogtail,) *Poa Trivialis* and *Poa Pratensis*, (rough and smooth stalked meadow grass,) *Festuca Duriaculus*, (hard fescue grass,) *Trifolium Pratense Perenne*, (perennial red clover,) *Trifolium Repens*, (white clover,) and the *Festuca Glabra*, (smooth fescue.)

The fall grasses are, the *Agrostis Vulgaris*, (the various red tops,) *Triticum Repens*, (creeping wheat grass,) and the *Lotus Major*, (birdsfoot trefoil.) Some of these are annual plants, that is, they arrive at maturity, drop their seed and die in one year. Others are biennial, or require two years to attain maturity, and then die, like winter rye and wheat. Others are perennial, that is, spring up from the root every year, for many years in succession. Where pastures abound in worthless grasses, the best remedy, if the nature of the land admits it, is to plow and cultivate two or three years, with some hoed crop—by which they will be killed out. Sometimes the larger and more vigorous grasses may be brought in by means of plaster or ashes or ground bone or compost spread upon the surface. These grasses thus stimulated, will attain a rank growth, and choke out the less valuable and sour grasses. Harrowing old pastures with a sharp harrow, and sowing them with oat grass, herds grass, or red and white clover, and dressing them with plaster or bone dust, will often succeed in bringing in a much larger and better growth of feed, and is money and labor well laid out. Dry plains, that yield but little grass, may be greatly improved by this treatment, applied to them in August, so that the grasses may get well rooted before winter. The late excellent Daniel P. King, of Essex county, had a tract of light, sandy plain land, which he brought into good condition, by plowing it in the summer, and applying a dressing of compost manure, and seeding it down with different kinds of grasses. He usually took off from one to two tons of hay, the next season—and then pastured three or four years, and repeated the same process. He was highly satisfied with the result of this treatment.

R.

MOLE CRICKET.

No insect of the cricket kind is so extraordinary, in its appearance and habits, as the *acheta gryllo-talpa*, commonly known as the mole-cricket. The color is of a dusky brown, and at the extremity of the tail there are two hairy appendages; the body consists of eight scaly joints, and the thorax is covered with a very hard and thick shield. But a most curious peculiarity of this insect, from which it received its name, is the form of its fore-feet, which spread out precisely like those of the mole, are strong, webbed and hairy, and terminate in separate claws. This curious insect is much larger in Europe than in this country, and much more troublesome and annoying. It often undermines the banks of canals, and destroys extensive fields and vegetable gardens, by devouring the roots of the plants, causing the tops to wither and die. It generally runs backward, and is said to burrow faster even than the mole itself.

Gardeners specially detest this insect, as in a single night it will run along a newly-sown furrow, robbing it of its entire contents; for nothing can es-

cape it, as its legs are so formed that it can with ease penetrate the earth in any direction, above, beneath, before, and behind. It seldom ventures above ground during the daytime, and the night is the time for its depredations.

These insects prefer moist meadows, and the banks of rivers and small streams. They excavate beneath the surface a chamber about the size of a small hare's egg, carefully smoothed and rounded, where are deposited a hundred or more eggs of a dusky yellow color. The eggs are hatched in about a month; the young resemble the parent in everything but the wings, which are wanting; at this stage they are soft, of a light color, and very small. They are very careful of their eggs, and the passage leading to the cell where they are deposited winds in various directions; besides this precaution, the anxious parent stations herself above to watch it. There is a certain black beetle which often attempts to get at the eggs to destroy them, but the watchful parent seizes the beetle from behind and bites it asunder.

This insect, although so troublesome in many countries, causes very little trouble in this, where it is very seldom seen. We know of but two specimens that have been taken anywhere in this neighborhood—indeed, they are the only ones we have ever seen—one was captured by Dr. S. A. Cooley, in Hartford, Connecticut, and is preserved in our own cabinet of entomological specimens, the other was also taken in Hartford by Mr. Henry A. Goodwin, by whom it is still preserved. The last mentioned is a remarkably fine specimen, and was captured during a severe shower, which brought it out from its place of retreat, as these insects are remarkably fond of moisture, and can live almost as well in water as out of it.

For the New England Farmer.

HISTORY OF THE SWALLOW FAMILY.

No. 2.

BY LEANDER WETHERELL.

Having invited attention to some of the habits of the barn swallow in a former article, it is proposed, in continuation of the subject, to call the attention of the reader to the Cliff or Republican Swallow, its history, and some of its habits.

The Cliff, or Republican Swallow, *Hirundo fulva* of Vieillot and Audubon, *H. lunifrons* of Say and Richardson, was little known here until quite recently. Audubon remarks that he first saw the species at Henderson, on the banks of the Ohio, 120 miles below the falls, in the spring of 1815. "It was," says he, "an excessively cold morning, and nearly all were killed by the severity of the weather. I described it, and called it *Hirundo Republicana*, in allusion to the mode of their association for the purpose of breeding. These specimens were lost, and it was not until 1819 that I was able to replace them. Visiting Newport, Ky., there, in the immediate neighborhood of Cincinnati, my ears were saluted with the chirruping of my long lost strangers." Maj. Oldham, of the U. S. Army, informed A. that they first appeared there in 1815, and had appeared regularly, about the 10th of April, ever since. They had, at the time of this visit, fifty nests completed, and several in progress. Until the females began to sit, they all roosted in the hollow limbs of the buttonwoods, on the banks

of the Licking river, the males only resorting thither, while the females were sitting. They not unfrequently attach their nests to rocks overhanging rivers, hence the name, Cliff Swallow.

This species of the swallow family was noticed by Vieillot, in St. Domingo and Porto Rico, in large flocks, about the middle of May; the year is not given. A writer claims, (name lost) that it was seen in Dennisville, Me., in 1795. The late Prof. Zadock Thompson says, a solitary pair first appeared at Whitehall, the south end of Lake Champlain, in 1817, and soon after, they appeared at Randolph, Richmond, and other places. Chief Justice Shaw says, that he saw it at the White Mountains, in 1816. Some account is given of its habits in Long's expedition to the Rocky Mountains. Say observed it in great numbers in the Rocky Mountains, in 1820. It appeared in various places in New York about this time. In 1824, the celebrated De Witt Clinton sent a description of this bird to the Lyceum of Natural History, in New York, calling it *Hirundo ossifer*, afterwards, however, adopting Vieillot's description. The writer first saw them in Worcester county about 1838. They are now very common, and well known to every observing farmer, as they usually build their nests under the eaves of the roofs, occupying nearly the whole space from one end of the barn to the other—numbering fifty nests or more, resembling retorts used by the chemist.

Being extremely desirous, says Audubon, to settle the vexed question respecting the migration, or supposed torpidity of swallows, I embraced every opportunity of observing and examining their habits, carefully noting the time of their arrival and disappearance, and recording every fact thus gathered from personal observation. Observation taught me that migratory birds, removing farthest south, depart first; and by parity of reasoning, those that remain longest, return earliest in spring. These remarks were confirmed by travelling to the southwest with the approach of winter. In Lower Louisiana, the Warblers, Thrushes, &c., were in full feather and song. The *Hirundo viridis* of Wilson, the white bellied swallow, (*Le Petit Martinet a ventre blanc* of the French of Lower Louisiana) remained about New Orleans later than any other swallow. I saw immense numbers of them during November. I kept a record of the temperature from the 3d, until the arrival of the *Hirundo purpurea*, the purple martin. The following extracts were taken from my journal, after a residence of many years in that country, visiting lakes whither these swallows were said to resort during the season of frosts.

Nov. 11.—Weather very sharp—heavy white frost. Swallows very abundant during the day, a usual occurrence, said the French and the Spaniards. From this date to the 22d, the thermometer averaged 65°; the weather generally a drizzly fog. Swallows flying over the city in thousands.

Nov. 25th.—Thermometer 30° this morning. Ice a quarter of an inch thick. The swallows resort to the lee of the Cypress swamp, in the rear of the city. Thousands were flying in different flocks. Fourteen were killed at a single shot, in perfect plumage, and very fat. The markets were abundantly supplied with these tender, juicy, and delicious birds. Saw swallows every day, but remarked them more plentiful, the stronger the breeze from the sea.

January 14th. — Thermometer 40°. Having seen the *Hirundo viridis* continually, and the *H. purpurea*, the martin beginning to appear, I discontinued my observation. During the winter, many of them retired to holes about the houses, others resorting to the lakes, roosting on the branches of the *Myrica cerifera*, called the *Cirier* by the French. Their aerial evolutions thither toward eve are truly beautiful. When in a few feet of the *Ciriers* they quickly disperse, and settle in a few moments. Their twitterings, and the motion of their wings may be heard during the night. As soon as the morning light dawns, they rise and fly off in pursuit of food. The hunters destroy large numbers of them with their canoe paddles, while perched on the afore-named shrubs.

Thus much has been selected and condensed from Audubon's great work on birds, in order to give the reader some facts going to prove that swallows are migratory birds—thus overthrowing that absurd notion of their hibernating with snapping turtles, serpents, and lizards, in mud holes.

A few words more from Audubon on the habits of the Cliff, or Republican Swallow, will close this already protracted article. Speaking of their departure after breeding, he says, they all assembled near their nests on the first of August, (this was at Newport, already named,) mounted about 300 feet into the air, and, at ten, A. M., took their departure, due north. At evening they returned, and continued these gregarious excursions until the third day, when, uttering their farewell cry, they took their final departure, returning no more hither, until the following spring-time, when they came as full of joy as ever, their spirit of republicanism not having lost or abated one whit of its ardor. Other members of this beautiful aerial family will be noticed, briefly, unless the editor says enough for the present.

For the New England Farmer.

THE MODEL FARMER.

The model farmer, according to my idea, is one whose physical, mental and moral natures are duly developed and cultivated.

Perhaps these are the qualifications of many other model men, besides farmers, and perhaps, of a model man in general, but at any rate, they are those of the model farmer, and for this reason:

The husbandman, the farmer, the man who makes it his particular business to till the soil, and who obtains his subsistence in this way, enjoys peculiar opportunities for developing his powers, physical, mental and moral. Now it is a fact, universally attested, that exercise develops and strengthens the part exercised, whether it be a muscle of the body, or a faculty of the mind.

The daily avocations of the farmer are such as call into play the largest part of his physical organism. He rarely complains of those numberless ills that arise from a want of proper exercise. Health and strength are his in a remarkable degree. Brought up to subsist upon hearty and wholesome food, to reject dainties and delicacies, as affording but little nutriment, and intended only for the gratification of a morbid appetite, he becomes vigorous, and capable of an endurance which the city-born and city-fed gentleman knows not of. He reaches manhood, not prematurely, but after hav-

ing passed through the full periods of childhood and youth. He has not been forced to maturity, and so does not suddenly sink into decay, and after dragging out a few years, with one foot in the grave, all at once thrust in the other and settle out of sight. But, taught from the first to battle with obstacles, to subject himself to exposure, and deny the cravings of appetite, he has become hardy and athletic,

"His massive limbs are strong and struggling."

He descends the downward slope of life, gradually and peacefully, and having accomplished his mission, the messenger comes and takes him, still toiling, from his post.

But if the farmer enjoys peculiar opportunities for developing bodily strength and activity, his occasions for promoting mental growth are none the less peculiar. It might appear, upon a casual observance of the subject, that other walks in life present more frequent and better opportunities for cultivating and enlarging the powers of the mind. But where, among the pursuits and callings of men, will you find such chances for the observation and comparison of facts, for theorizing and speculating, for making discoveries, and exercising the power of invention? Where, too, will you find such difficult, and at the same time interesting problems for solution, as the farmer has constantly before him? He, of all others, has opportunities for exercising discrimination and judgment, in training the inferior natures of plants, and animals, which fall to his charge. The right discharge of his duties demands deep thought and careful reflection.

Who is the most successful cultivator of the soil, he who pursues a routine of action that somebody in a past age, under entirely different circumstances, originated, or he, who considering his own means and resources, strikes out a system which his judgment dictates as the one best suited to his present condition and wants?

The true husbandman will study his soils, and learn what elements they possess, what seeds are best adapted to them, and how he can secure the largest yield at the smallest expense. And does this require no exercise of the mental faculties?

Many other persons are, in a measure, restricted to the study of printed pages, and have not access to the book of nature, cannot peruse those "books in the running brooks," nor drink in knowledge from the fountain head.

Here is an advantage, which the true husbandman will not fail to improve. But he is by no means wholly confined to the study of nature. There are hours of relaxation from bodily toil, rainy days, and long, winter evenings, which our model farmer will employ in gathering from books the experience and opinions, both of his predecessors and contemporaries. Carefully digesting these, and combining them with the results of his own observation, and afterwards practicing them, he will attain a superiority over his less diligent and studious neighbor. But his advantages cover a wider ground still. Not only for physical and mental improvement does he possess peculiar opportunities, but for moral also. Who, like him, can behold so many manifestations of the Father's goodness? Whithersoever he turns his eye, he sees life gushing and exuberant. The little songsters of the wood, the many insects that swarm the grassy meadows, the "lowing herd," the "finny tribe," springing sportively from their

native element, all meet him as he goes forth to his labor in the morning, or returns home at night-fall, and tell him of their gratitude to God for life and its joys. If he possesses true sympathies, he will join in the universal ascription of praise and thanksgiving to the Creator of all.

As he considers "all this scene of man," he confesses it a "mighty maze, but not without a plan." He witnesses the unfailing regularity of all the changes in nature. In the "seed-time" he stakes his all on the coming of the "harvest." Counting on the faithfulness of nature, he lays plans, and takes preliminary steps for extensive schemes, which he would not dare enter upon, were nature accustomed to swerve in the least from her uniform course. He sees nature co-operating with him to bring about desired ends. He, if any one, may see the harmony and fitness of things. When he searches for the cause of this wonderful beauty and order, lo! it is God.

Is not then the husbandman peculiarly surrounded by circumstances suited to improve his moral nature? What folly for such a man to repine at his lot, and seek to exchange his independence, and happy seclusion from the vices of society, for the uncertainties of trade, or for pursuits involving a ten-fold greater risk of life and fortune than can possibly pertain to agriculture.

If he rightly estimated his privileges, he would consider himself the happiest of men, and if he rightly improved those privileges, he would elevate at once, in the eyes of mankind, the labor of cultivating the soil to be the most dignified and ennobling of employments.

J. B. K.

March, 1856.

WORK—AN ODE.

BY G. S. PERCIVAL.

There is a giant strong and brave,
And generous as great,
Who for the feeble race of man
Doth early toil and late.
He delveth in the murky mine,
And on the furrowed lea;
And, with his vessels built of oak,
He plows the stormy sea.

The forest falls beneath his axe,
And cities vast arise;
And verdant fields look smiling up,
To greet the smiling skies.
He builds the mansion towering high,
The little cottage near,
And fills-to overflowing both,
With all the heart can cheer.

He chains the streamlet to the wheel,
And bids it turn the mill;
He harnesses the iron horse,
And guides him at his will.
His powerful arm defends the weak
Against o'erpowering wrong;
And grateful hearts conspire to praise
The giant, great and strong.

Fair hands have twined a wreath to deck
His rugged brow with bay,
And we, with joy, have met to keep
His festival to-day.
Then farmers, artisans and all
Who scorn your task to shirk,
Come, join your song with ours, to sing
The mighty giant, Work!

For the New England Farmer.

REPORTS OF THE STATE BOARD OF AGRICULTURE.

MR. EDITOR.—You have read these reports, and to you therefore anything I may say will not apply. For the past month or so, I have devoted my spare moments to reading the three volumes already issued. Why, Mr. Editor, the very sight of these volumes, as they lay on my study-table, fill me with pride—pride that our good old mother Massachusetts has produced three such monuments to the enterprise, industry and progressive spirit of the farmers of the good old Commonwealth. Look at them—the manner in which they are got up—the information contained in them. There are no superior documents issued, either State or national. They are perfect text books for managing a farm in all its details, and a person may take these books, and by reading and digesting their contents, become an accomplished farmer, without other instruction. I have been very much interested in reading the experiments which have been made on the State farm in Westboro'. While as yet there is little or nothing as fairly settled in regard to the application of manures for instance, still, there must in the very nature of things, be some certain and fixed truths come out of them. And for one I regret that the Legislature *just dissolved* acted with such illiberal spirit towards the Board—cutting down its appropriation from \$6,000 to \$3,000. The wiser course would have been to have added \$4,000 to the six—but if the farmers throughout the State approve of this act of their representatives, all right, I have nothing to say, only permit me to *think*, Mr. Farmer, that your brothers do not fully understand their interest yet. Just look at the hosts of schemes which are presented to our Hon. General Court every year, asking, and many of them obtaining grants of money, the benefits to the State of which, in comparison to what the Board of Agriculture wish to do on the State farm, for the real good of the farmers—"is as the picked end of nothing whittled down to a point." Ten thousand dollars a year is little enough for such an object, and I will venture to say, Mr. Editor—and with all seriousness too—that in twenty years' time, the State would be the gainer. The fact is, farmers, many of them, not all, wish the State to manage as they do their farms, with a more liberal expenditure of money in the right direction, and both would be greatly benefited.

Individual farmers are not able to carry on their experiments, at least very few; while the good received is for all, high or low, rich and poor; the man of one acre or of a thousand acres. Now the State is abundantly able to do this business; if *all* is a failure, no one feels it, while every *truth or fact* brought to light is a public benefit to the end of time. Mr. Editor, I go in for an appropriation of ten thousand dollars a year for five years,—that's too short a time—say ten years, to the State Board of Agriculture, for carrying on experiments in all the different branches of farming, in the broadest acceptance of that term; and I believe that if all the farmers throughout the State could have a copy of these reports, and read them, they would say amen to my proposition. There is altogether too much *theory* abroad in the community, and too few facts and truths. We want the latter, and this the Board are trying to give us.

In conclusion, I once more express my regret at

the short-sighted policy pursued by our Gen. Court in this matter. I only hope more intelligent farmers will compose the next one; or at any rate, give as much out of the treasury of the State to advance one of its greatest and most important interests, as to a Female Medical School. I believe every town has a copy of these reports. Gentlemen farmers—get them—read them.

NORFOLK.

August, 1856.

RESTORING THE DROWNED.

The great number of deaths from drowning which take place at this season, will give interest to the following new rules for the treatment of persons rescued from the water. They are by Dr. Marshall Hall, of London, perhaps the most distinguished physiologist of the present day, who has investigated the subject of drowning, and established new principles of treatment. He condemns the rules proposed and practiced by the Royal Humane Society, and substitutes the following for the treatment of asphyxia from drowning.

I. Send with all speed for medical aid, for articles of clothing, blankets, &c.

II. Treat the patient on the spot, in the open air, exposing the face and chest freely to the breeze, except in too cold weather.

I. TO EXCITE RESPIRATION.

III. Place the patient gently on the face—to allow any fluids to flow from the mouth.

IV. Then raise the patient into the sitting posture, and endeavor to excite respiration.

1. By snuff, hartshorne, &c., applied to the nostrils;

2. By irritating the throat, by a feather or the finger;

3. By dashing hot and cold water alternately on the face and chest.

If there be no success, lose no time, but

II. TO IMITATE RESPIRATION.

V. Replace the patient on his face, his arms under his head, that the tongue may fall forward, and leave the entrance into the windpipe free, and that any fluids may flow out of the mouth; then

1. Turn the body gradually but completely on the side and a little more and then again on the face, alternately (to induce inspiration and expiration);

2. When replaced, apply pressure along the back and ribs, and then remove it (to induce further expiration and inspiration,) and proceed as before;

3. Let these measures be repeated gently, deliberately, but efficiently and perseveringly, sixteen times in the minute only.

III. TO INDUCE CIRCULATION AND WARMTH.

1. Continuing these measures, rub all the limbs and the trunk upwards with the warm hands, making firm pressures energetically;

2. Replace the wet clothes by such other coverings, &c., as can be procured.

IV. OMIT THE WARM BATH UNTIL RESPIRATION BE RE-ESTABLISHED.

To recapitulate—observe that

1. If there be one fact more self-evident than

another, it is that artificial respiration is the *sine qua non* in the treatment of asphyxia, apnoea, or suspended respiration.

2. If there be one more fact established in physiology than another, it is, that within just limits a low temperature conduces to the protraction of life, in cases of suspended respiration, and that a more elevated temperature destroys life.

3. Now the only mode of inducing efficient respiration artificially, at all times and under all circumstances, by the hands alone, is that of postural manœuvres described above.

This measure must be adopted.

4. The next measure is, to restore the circulation and warmth by means of pressure firmly and simultaneously applied in the course of the veins, therefore, upwards.

5. And the measure *not to be adopted*, because it tends to extinguish life, is the warm bath without artificial respiration.

The measure must be relinquished.

These conclusions are at once the conclusions of common sense and of physiological experiment. On these views human life may, nay, must sometimes depend.

ABOUT DIGGING WELLS.

Editor Michigan Farmer—Dear Sir:—Some time ago I thought of sending you a short article on the above subject, but it had nearly escaped my mind until I saw an inquiry in the last number of the *Farmer* in reference to the best manner of stopping quicksand from flowing in at the bottom of a well.

Now I am not a "well digger," but as I believe I have some knowledge that way, gathered from experience and observation, that may be useful to some, I will endeavor to relate the same for the benefit of all your readers who may be interested.

About ten years ago the coming fall, I hired two young men who were engaged in the business, to dig me a well on my farm, then in the town of Green Oak, Livingston county. They took it by the job to dig and stone and finish up right, and warrant three feet of water, for 24 dollars, provided they did not have to go over forty feet.

From the experience of the neighbors, and the make of the ground, we estimated it at thirty-four feet. I was to furnish stone and timber for curbing necessary, on the ground.

So they commenced, and after throwing out about eight feet by hand, they set up their apparatus for raising out the rest by horse power. This was constructed by simply taking a piece of plank about two feet long, and two inches wide, and setting it up at an angle of forty-five degrees, with the upper end right above the well, and supported with two heavy braces, set up at the same angle, in different directions, and secured with iron pins at the top. Then a notch in the upper end of the plank, and a pulley of about eight inches in diameter, for the rope to run over, with the tub into the well, and a roller at the bottom of the plank for the rope to run under, completed the "machine."

Then they had what is very necessary, a quick, active horse, and well broke, to go ahead and back up at the word every time, without flinching or faltering:

The soil was loose sand, and they chose to curb it all the way down. This was done by splitting

out stuff of oak timber, five feet long, and about six or seven inches wide, and notching them half on one side, and putting them in log-house fashion.

When they came to the water, as was always the case there on the openings, they found an abundance of quicksand. So to stop that out they went to the woods and cut a white oak tree about three feet over, and cut off three feet of the butt, then marked off about three inches thick around the outside, and split it off into pieces like stave bolts, being careful to number them so as to set them up just as they grew; then took them home, set them up, hooped them together—having first chambered off the outside so as to shapen the lower end, then let them down into the well, and drove them down into the quicksand, a little at a time, being careful to keep them to their natural place, dipping out the sand from the inside, and thus settling them down till the top was even with the water.

Thus we calculated we had a foundation as firm as a rock, and as durable as the everlasting hills; for being under water it would never rot out, and the thickness of the staves would prevent them from ever moving from their place. It kept the sand out perfectly, the water came in from the bottom, and after the first six months, was as clear as the crystal fountain. I deemed it good enough to slack the thirst of an angel, should I be so fortunate as to entertain one unawares.

W. O. HOUGHTALING.

Grand Rapids, Kent Co., Mich.

For the New England Farmer.

SOWING TIME.

FRIEND BROWN:—The Northern States—Maine, Vermont and New Hampshire—should not fail to get in their wheat during the first week of Sept.; Massachusetts should do her sowing by the 15th of Sept., if not earlier. Should any farmer require reasons for sowing so early, we answer, and will further submit a wholesome practice for him to adopt.

1. Plow in the stubble (with manure if you have it) of an exhausted mowing field.

2. Plow deep, whether it be a tilled or mowing field.

3. Soak the wheat over night in salt pickle, to destroy insects, and skim off foul seed; see that no chaff is in your seed wheat. It resembles the seed of twich grass.

4. Rake the seed with ashes and lime when wet, and it will come up in three to five days.

5. Sow a bushel and a half to three-quarters to the acre.

6. Cultivate in, three inches deep, with a horse plow, or cultivator.

7. If you have no manure, sow ashes, or ashes and lime, upon the field, and cultivate in with the grain.

8. Let this work be done the first and second week in September.

Early sowing, and deep planting, that the roots get well imbedded, are positive proofs against winter-kill or clayey soils. To wait till the corn or potato crop is taken off in Oct., then sow wheat, and slightly harrow in, gives but a meagre chance for the roots to fasten themselves against the attacks of thawing and freezing, called "winter-kill,"—thus, being thrown out to die.

Two weeks growth gained in autumn is two weeks gained in Spring—and most important of all, *two weeks gained upon dog-days*, with their rusting, blighting effect. Could it be said to every New England farmer, and the advice heeded, sow three acres of winter, and two acres of spring wheat, annually, for three years, and I am sure it is no exaggeration to say, they would all bread their families, and have grain to sell.

What necessity, the past two years or more, for action! Does it not continue? Can your farmers afford to buy flour at the rate of two-fifty to three dollars a bushel for wheat, when they can produce it on every farm in New England, at one dollar or less, which will pay better than any other crop at that price? I had resolved never to trouble you further upon this subject. I have had no motive, but to benefit the farmer; and to your excellent paper, as the exponent of my views, I am much indebted.

The Western farmers can see no reason, they say, why wheat cannot be grown with you as successfully as other grains, and express *surprise at your apathy*, but while you are good *paying customers*, they would like the privilege of feeding you from their own granaries. Respectfully, H. POOR.

New York, Aug. 25, 1856.

REMARKS.—We had commenced an article on the subject discussed by Mr. Poor; but his is so directly to the point, and so perfectly expresses our own views, that we are happy to give him the preference. Take his advice, gentlemen, you will find profit in it.

For the New England Farmer.

GIVING MEDICINE.

If Dr. J. C. Jackson, whom you quote in your paper of Aug. 16th, is correct, our medical men, it seems, must either be very greatly deluded, or guilty of the most "outrageous knavery." Now the famous Dr. Samuel Johnson is often quoted as saying, "every sick man is a rascal." If, then, it should turn out that all who give medicine, and all who are sick and take it, are either outrageous knaves or rascals, the conclusion by people of good sense must be that there is no want of bad men in the world.

Now, sir, I am an old school physician; was bred such, and have practised as such more or less for thirty years, and yet I am ready, or almost so, to endorse you and Dr. Jackson both, if you will allow me to change one word in the doctor's statement; I wish to substitute "men educated," for "deluded." I confess, I do not like the razor the doctor shaves with—it is rather harsh; but then, he does not shave much too closely.

You quote the elder Dr. Jackson, in support of what you regard as a somewhat modified, or less ultra view than that of the sage of Glenhaven.—You might have quoted his son, whose life was written by his father, and doubtless correctly written. And Boston has at this moment in it other eminent medical men, who, apart from all bitterness of language or censoriousness, are not very far from the same "platform." It has in it at least one respectable medical institute—that of Dr. Brown, at 20 La Grange Place, where all active medicine is repudiated, and always has been, and the success of

that institution for the last year will compare favorably with that of any other in the known world. The two oldest and wisest physicians of Cleveland are—or were three years ago—of the same opinion. One of them absolutely refused to give any more active medicine, and the other only gives a little. I could mention many more such men. In truth, as you justly intimate, the idea of avoiding medicine is fast gaining ground, and I, for one, am heartily glad of it.

I will not, indeed, say with the Glenhaven doctor, that "no living creature was ever cured by it." (medicine.) It is true that in a certain physiological sense, no one ever *was* cured; but this is not Dr. J.'s meaning. He is using customary language. I will say, however, that so far as I know, no one ever was *so well* cured (I do not say so quickly) by medicine as without it. There is a great deal in curing people well. Sumner was being cured, it was thought, but Dr. Perry will tell you, that when he found him, he was far enough from being in a way to be *cured well*.

In short, I am glad to see this subject up in your paper; it is one of great practical importance to a world that dearly loves to be drugged and dosed.

CORRECTION.

In my "Word of Caution," in your paper of the 16th, I made a mistake, as I now see. Messrs. Parsons & Co. did not say they had forbidden Mr. S. to use their name in the way he did; but they told me, in their last communication, that he *ought* not to use it in such a way. I may also add, that those gentlemen appear to think Mr. S. a fair man, after all! I am sorry to see such good men as they are mistaken.

LARGE TURNIP TOP—PERHAPS.

I have in my garden, a Peruvian turnip, the circumference of whose top measures from seventeen to eighteen feet. The size of the tuber is not remarkable, not over a foot, I suppose, in circumference; and as I am not much of a horticulturist, perhaps the top still is not so remarkable in the eye of your readers as of myself. W. A. ALCOTT.

DESTRUCTION OF WEEDS IN PAVED PATHS AND COURTS.—The growing of weeds between the stones of a pavement is often very injurious, as well as unsightly. The following method of destroying them is adopted at the Mint in Paris and elsewhere, with good effect. One hundred pounds of water, twenty pounds of quick-lime, and two pounds of flour of sulphur, are boiled in an iron vessel; the clear part drawn off, and being more or less diluted, according to circumstances, is to be used for watering the alleys and pavements. The weeds will not reappear for several years.

This plan will prove most effectual, but remember that the liquid will be death to the box or other plants upon the borders of such plots or paths, if it be allowed to reach the roots.—*Am. Ag.*

FRUITS AND FLOWERS.—J. S. C. will find *Breck's Book of Flowers*, already issued in a revised edition, and *Downing's Fruit of America*, a new edition of which will soon be published, the most valuable works on those subjects. For sale by J. Q. A. Warren, 119 Washington Street, Boston.

For the New England Farmer.

FATAL DISEASE AMONG HORSES.

FRIEND BROWN:—I have recently lost a very valuable mare by some disease unknown to me, or to any who saw her while sick. My object in this communication is to call public attention to the matter, as mine is the third horse that has died within a few days with similar symptoms, in this town.

It seems to me to be necessary to give you a full account of her treatment, living, &c., for the past few months, in order that you or your readers may judge of her condition for themselves. She was turned to pasture about the 15th of May, and was not taken out until July; she had a colt on the 24th of May; her keeping has been the best of pasturage, without grain. I used her to cart my hay, but that all lay within one-half mile of my barn. She has not been harnessed in a carriage more than five or six times within the last four months, and then not driven more than two or three miles at a time. She was in the best flesh, and had the sleekest and most shiny hair that I ever saw a mare have that suckled a colt. She was turned out in the morning, apparently as well and lively as ever she was, and within fifteen or twenty minutes, returned, with her own accord, to the shed, and was then discovered to have lost the use of her legs to such an extent that she could hardly walk; she threw up her head and snuffed a few times, then fell to rise no more. After she fell, her legs were stiff and cold, her head and ears were very hot, but she lay without any apparent pain until she died; she appeared to be conscious as any beast, for at times she would whimper for the colt, and would look up when called by name; she lay in this condition for about eleven hours, then died. We rubbed her for two or three hours and bathed her in white lye, attempted to bleed her, but the blood was so thick (and very black) that it would not run.

I have a faint recollection of reading in some paper of a disease that was prevalent in Indiana, that carried off every horse that was attacked with it within twelve hours after the attack, if a certain medicine or course of treatment was not pursued, all of which I have forgotten. J. B. FARMER.

Concord, Aug. 23, 1856.

REMARKS.—The mare spoken of was one of the best animals in Middlesex county. Yesterday, the 24th, we were called to see another horse, in the same neighborhood, attacked in the same way, and presenting the same symptoms that appeared in Mr. Farmer's mare. They are few, and are weakness, or giddiness, indicated by a staggering gait—coldness of the extremities, some pain, though apparently not severe, with a continual pushing out of the head, and drawing both lips away from the teeth; the pulse is weak and slow, and an entire loss of appetite, but there is perfect consciousness.

We have heard of eight or ten deaths by this disease, and fear that it may become quite prevalent. What shall be done to arrest it? In the case of the horse which we were called to see, we recommended gentle, but continued rubbing, and a pint of castor oil. Enough of this not being at hand, a por-

tion of sweet oil was added, and the dose administered. The next morning the horse was greatly relieved, and justified the hope that it would recover.

P. S. — Since writing the above, we learn that the horse has recovered, and is again at work. We have great confidence in the treatment resorted to.

FAT MEAT AS FOOD.

The prevailing fashion and taste are against the use of fat mutton and beef. At hotels and private families, the fat meat to which persons are served, is usually left, and the lean only eaten. Those who purchase meat, of course select the lean, instead of the fatter pieces, and butchers, accommodating themselves to the demand, kill all sorts of lean and ill-fed animals.

The losses resulting from this are many. In the first place, it is contrary to public economy, the number of lean animals sacrificed to secure a given weight of meat, being twice as great as would be required, if all the animals slaughtered for food were well fattened. The cost of raising animals far exceeds the cost of fattening them, and therefore a pound of lean meat costs more to the producer than a pound of fat, besides the unnecessary waste of animal life involved. Another disadvantage resulting from the use of lean meats exclusively, is in the fact, that lean meat, whatever the quantity used, will not supply the place of the fat, especially in winter. Food is required for two purposes—one is to supply materials for the growth of the body, and to repair the waste which labor and all our activities occasion; the other use is to supply fuel for the maintenance of animal heat, the amount required for the latter purpose being much greater in cold regions, and in the colder portion of the year. The fat of animals is in many respects, for man, the best and cheapest of all the heat-producing articles of diet. In high latitudes, there is no substitute for it, or possibility of doing without it; and the same thing is true, though not to the same extent, in temperate climates during the winter. Strangely enough, in this variable climate, our diet is made comparatively uniform by fashion and habit, instead of varying with the changes of temperature. In summer, we use too much of carbonaceous, or heat-producing food, and liver diseases and various fevers are the consequence; while in winter, a sufficiency of such food is not supplied, and hence the prevalence of pulmonary affections.

Life and health are more involved in this matter, than some imagine. In the last January number of the *Ohio Medical and Surgical Journal* there is an excellent article, that was read before the American Medical Association, by Dr. Hooker, which shows conclusively, that persons abstaining from fat meat, are much more liable than others to lung diseases, and especially consumption; while those who are in the constant habit of using an abundance of fat meat, are almost untouched by this terrible destroyer. Multitudes of facts within the knowledge of every one, are referred to by this writer in support of his conclusions, placing the matter, one would suppose, beyond doubt.

What, then, is the conclusion of the whole matter? Just this:—let farmers see to it that the animals designed for the butcher are properly fattened; let butchers, who have a regard for their

reputation, buy only good animals, and let those butchers be discountenanced, who will continue to murder such as are unfed; let consumers use a due proportion of fat meat with the lean, and let the proportion be larger in winter than in summer; and especially, let those who have constitutional tendencies to consumption, learn to eat good fat meat; and if their present tastes are averse to it, let them struggle to overcome this aversion, as though life depended upon it. How much better is good, fat beef, than cod liver oil; how much better it is, to use the beef while you are well, and keep so, than to use quarts of the oil, when it is too late;—and finally, let all those who are interested in the health and vigor of our whole people, use their endeavors and influence to disseminate right views in relation to this important matter.—*Ohio Farmer.*

COAL LOCOMOTIVES.—After a variety of experiments, A. S. Adams, master machinist of the Boston and Worcester railroad, has now in operation a freight locomotive adapted to burning coal, which seems so well to meet the wants of the road that all the engines of the company, used in drawing freight, are to be altered to the same style. The engine in question, the "Bison," has one of the Delano grates, by which the coal is forced from the bottom up through the bed of the fire. This grate is but 38 inches in length, but by its manner of operation all the gas is consumed and the top of the bed of coal is kept always ignited, no new coal ever being thrown upon it. The draft is also kept good and is never obstructed by clinkers. Careful estimations of the precise cost of running this engine have been made, and it appears that with it for 12 cents per mile a common freight train can be run and make the usual speed. A wood engine to run the same train costs 30 cents per mile. The saving, as will be seen, is very great. The cost of altering a common wood engine to fit it for burning coal is but \$150; and as we have before remarked, the Worcester Company have decided to have all their freight engines converted into coalers as speedily as possible.—*Traveller.*

TO DRESS SKINS WITH WOOL OR FUR ON.—Take two table spoons full of saltpetre and one of alum; pulverize freely, mix them together and sprinkle carefully over the flesh side of the skin. Then roll the skin together and let it remain a few days, according to the weather. Unroll and scrape them with a chip, dull knife, or draw them over a board fence until they are dry, soft and pliable.

ERRATA.—In a recent article on the *Milking Machine*, first paragraph, for process, read progress. Last period of fifth paragraph should read:—"The cap fits to the top of the cup, air tight, by its own construction, and also hugs around the end of the teat so closely as to prevent the air from passing down beside the teat, but by its flexibility," &c. Sixth paragraph, for flinching read pinching. Signature should be, Kingman.



A SQUARE COTTAGE.

Below, we give another plan of a house from WHEELER's "*Homes for the People*." Houses upon this plan have been erected in the vicinity of Hudson, N. Y., at a cost of \$2,300. We cannot find room for the whole description, so that if any one decides to adopt any of the plans we give, they will find it profitable to purchase the work.

The plan exhibits a building, thirty-eight feet front, and thirty-two in depth, with a wing of one or two stories, as the amount of accommodation needed may require—twenty feet by thirteen.

A wide veranda stretches across the front, and in the centre is the entrance hall, No. 1, with stair-

case. Upon one side is a sitting-room, No. 2, which is fifteen feet square, and in its rear a dining-room, No. 3, fifteen feet by nineteen, provided with a china closet at one end, and corresponding with it an entry with drawers and wardrobe, leading to a bed-room, No. 4, the dimensions of which are fifteen feet by ten.

No. 5 is a parlor, with veranda, and with one of smaller size at the side. This room is fifteen by twenty feet six inches. All these rooms are ten feet high in the clear. The wing contains a back entry, No. 6, with outer door and store closet, lit by a small window, and next to this a kitchen, No. 7, with a back staircase to the rooms over (if the wing be made two stories in height) and under this, one to the cellar, which should be under the whole house, or only this portion, as the nature of the soil might permit.

The kitchen contains a sink and cook's closet, and is eight feet high in the clear.

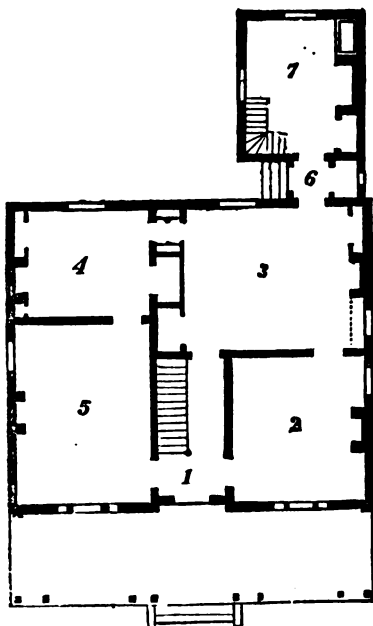
The wood-house, necessaries, and other outbuildings, are intended to be in a distinct erection, connected with the rear of the house by a covered way, or disposed in such a manner as the nature of the situation rendered desirable.

The arrangement of the chamber floor affords four large sleeping-rooms above the apartments below, and two small ones; the latter contrived in front, at the end of the hall, and the other, by a continuation of the same partition across the end of the room, over the dining-room.

The sleeping-room for servants would be in the wing.

The height of the chambers in the main body of the building is eight feet in the clear, with a space in the roof for storage.

The view of the exterior shows that by simple grouping of the necessary details of the building, a liveliness of effect can be obtained which the square form of the place seldom permits. The common defect is in the persisting of country-builders in filling their houses with windows—to the destruction of all of what the painters call breadth, and to the actual discomfort of the inhabitants, who show their sense of the existence of



PLAN OF THE FIRST FLOOR.

evil by invariably keeping the windows closed by blinds inside or out, but who rarely have the good sense to resist the temptation to make their house, when building, a perfect glass-case. In the plan under discussion, the whole effect would be destroyed by pairs of windows in each room, and it is strange how constantly, in house after house, the blunder is repeated.

HEALTH FOR CHILDREN.

There are as many children die in cities as in the country, and half the children born do not reach ten years. Such a result could never have been intended by the wise and kind Maker of us all. A different result must be brought about, by the exercise of the reason which is implanted in all parents, and which, if properly cultivated and practised in the lights of our time, would soon work a wonderful change in infantile mortality.

1. Children should sleep in separate beds, on mattresses of straw or shucks of corn.

2. Require them to go to bed at a regular early hour, and let them have the fullest amount of sleep they can take, allowing them in no case to be waked up.

3. Except a rug beside the bed, there should be no carpet on the floor of their chamber, no bed or window curtains, no clothing of any description hanging about, no furniture beyond a dressing-table and a few chairs, no standing fluids, except a glass of water, and nothing at all in the way of food, or plants, or flowers. In short, a chamber should be the cleanest, driest, coolest, lightest and most barren room in the house, in order to secure the utmost purity of air possible.

4. Make it your study to keep your children out of doors every hour possible, from breakfast until sundown, for every five minutes so spent in joyous play increases the probabilities of a healthful old age.

5. Let them eat at regular hours, and nothing between meals; eating thus, never stint them; let them partake of plain substantial food, until fully satisfied. Multitudes of children are starved into dyspepsia. The last meal of the day should be at least two hours before retiring.

6. Dress children warmly, woollen flannel next their persons during the whole year. By every consideration, protect the extremities well. It is an ignorant barbarism which allows a child to have bare arms, and legs and feet, even in summer. The circulation should be invited to the extremities; warmth does that; cold repels it. It is at the hands and feet we begin to die. Those who have cold hands and feet are never well. *Plenty of warmth, plenty of substantial food and ripe fruits, plenty of sleep, and plenty of joyous out-door exercise, would save millions of children annually.*—*Hall's N. Y. Journal of Health.*

SEA WAVES AND SEA SICKNESS.—The old vague account of waves being "mountains high" was well known to be an exaggeration; but we do not think even philosophers were prepared for the statement made at a meeting some years since of the British Scientific Association by Dr. Scoresby, that they averaged no more than 20 feet in altitude, and rarely exceeded 28 feet. The popular impression, principally produced by marine painters, that waves

formed valleys thousands of yards across, down the sides of which ships slid as though they were about to be engulfed, seems to have been equally erroneous, as the maximum length of ocean waves, according to the same authority, is 600 feet, whilst in a moderate gale they are only 300, and, in a fresh sea, about 120 feet in length. A moment's consideration of these facts leads to the conclusion that long ships must have a great advantage over short ones with respect to the rapidity with which they make their journey, as it is quite evident that whilst the latter have to perform their voyages by making a series of short curves—much to the impediment of their progress, and to the discomfort of their inmates—the former, by ruling the waves with their commanding proportions, make shorter and smoother passages. As steamers grow larger and larger, sea-sickness must therefore gradually diminish.—*Scientific American.*

For the New England Farmer.

RURAL ECONOMY OF THE BRITISH ISLES—No. 18.

NEW ENGLAND.

Greater ignorance and greater neglect of agriculture has been witnessed, nowhere, than in the United States. This is perhaps strongly stated, but is near the truth. In the South and West, the proprietors held land enough to persist in bad management, for two or three generations; an exuberant soil produced abundant crops, without artificial enrichment, or very heavy labor; when one field was exhausted another was cleared and tilled to poverty in its turn. This kind of farming so impoverished the country in some of the older districts, that the inhabitants were, at length compelled to emigrate to a new region; the employment of more skill and capital on the old farms being out of the question.

In New England, a less fertile soil always demanded more labor; yet few attempts were, for a long time, made and now they are not too frequent, to go out of the common routine of a very restricted cultivation. The inclination among the rural population of New England has been almost universal, to devote all their skill and capital to some branch of trade or manufactures, or to navigation. Those who have been disposed to continue agriculturists, have found it easier and more congenial to their restless and enterprising natures, to sell out, collect their effects, and remove a thousand miles, to a richer region, than to think of improving the old homestead. Change of location or change of pursuit, rather than the employment of more skill and more capital, have, thus far, been the means of bettering their condition, among New England farmers. Hence our rural population has been kept scattered and thin, over the face of the country.

The routine of cultivation has, in general, been this—a field of Indian corn, with a border of potatoes—a few fields of small grains—an old pasture and old meadow of natural grass, and with a stock of cattle to suit. The only part of the farm, well cultivated, was the field of Indian corn, which received, commonly, two or three plowings and hoeings—the plant beautiful, in all stages of its growth. No root crops were ever thought of for animals—no manure provided for the farm, except what was thrown from the barn windows, during the winter

Breeds of cattle or horses were not considered; but such were raised or bought, as happened to be. Indeed, with the exception of the working oxen, if the other stock was kept from starving, during the winter, the farmer was satisfied. In a plentiful year, all that was raised was consumed, and if a little waste was necessary to this end, it was readily resorted to. If there was a large crop of corn, the turkeys, pigs and hens were somewhat fatter; and if any hay was left, old hay was considered poor stuff. It would have been difficult, in any county, to have found ten farmers who looked forward to the blending of the operations of two or three years together, or who had any system of farming or of agricultural economy. How often, even yet, is the question discussed of how much working capital is necessary for a farm, or how many animals it will support, or can be made to support? I do not say that better things have not been attempted, but the experimentalist has, generally, been a warning; and after having made his improvements, of walls, fences, showy barns, and orchards; and after having cultivated his fields without economy of labor and with strict economy of manures and outlays in stock and implements, and without a system, running over a term of years, he has found his produce a few tons of hay, a few bushels of corn and potatoes, and has joined his testimony to that of others, that it was impossible to make anything, by farming, in New England.

Still, I can call before my mind scenes which even our poor New England agriculture has created, on which my eyes have rested, with a delight which no other scene on earth can call forth—the farm-house, looking like a home, shaded by two or three spreading elms, with its large barns, where the grain and hay were stored and the cattle housed, with their large barn doors and ample floors, for husking, and threshing, and for a play-place, for rainy days; with its extensive orchard; its one or two fields of Indian corn, with pumpkin vines interlaced; its small brook-home of trout, running through the green meadow; within sight of, if not adjoining, the noble wood-lot of trees of clean and smooth bark free from moss, such as are found in no other land, that supplied the fuel of the family fire, which from capacious fire-places shone on the manly, honest, cheerful faces, through long winter evenings, of a religious New England household.

Still, though our agriculture afforded many lovely scenes, these did not alter its history. Farmers were generally in debt; when the income of the year failed to meet its expenses, they gave notes to the store-keepers for the balance, until the debt, in a few successive years, swelled to a magnitude that demanded a mortgage, the foreclosure of which swallowed up the farm; while the law of attachment swept off its personal property. Such has been the history of our agriculture.

Agriculture has some disadvantages in New England; our late springs and their June frosts,—our droughts—and our long winters.

The evil of late frost is most felt by the farmer in the cultivation of Indian corn; and against this evil, he must offset the splendid advantage he has in the warm summer, when the plant grows *audibly*, and the late falls.

The effect of our droughts can be entirely overcome by deep tillage, which our soil needs. About six years ago, rather in the way of experiment than of profit, I began to trench two or three acres of

land, resolved to trench it five or six years, systematically, mixing about four inches of the subsoil, at every annual trenching, with the upper soil. The natural soil was a gravelly clay loam, of about a foot in depth. By bringing up each year about four inches of subsoil, and mixing it with the upper soil, and bringing it in contact with the atmosphere and manure, the whole soil is now about three feet deep. No drought has ever affected this land. The same thing which I did with the spade, might have been done by the subsoil plow, followed by a common plow, till the soil was sufficiently deep for all purposes.

Our long winters, the farmer must find the blessing in which God has imparted to them, rest and improvement, if not profit.

I do not admit the disadvantage of our soil, for I do not think it, naturally, inferior to the natural soil of England, the best farmed country in the world. Our climate is not as favorable as that of England to the turnip; but Indian corn is a gift of God as valuable to us as the turnip is to England. But we are, for the most part, successful in the culture of the turnip.

The complaint is often made that our New England farmers occupy too much land. This is not the proper form in which the fault, with which our farmers are chargeable, should be stated. The proper complaint is, that our farmers do not employ, in the tillage of their lands, capital proportioned to their acres. Capital, among New England farmers, being limited and more divided than in England, it is expedient that the farms should be smaller, so as to correspond with the working capital. Suppose the working capital to exist in proportion to the acres cultivated, the size of the farm is determined by such circumstances as these, the nature of the soil, the climate, and the kinds of crops prevailing. Branches of agriculture that require a great amount of manual labor, demand a greater division of fields of operation. You are struck with this fact, in the market gardens, in the neighborhood of cities; in the onion cultivation, in the neighborhood of Wethersfield. A larger farm is expedient where a part is fine meadow land, especially, if it be overflowed and mowed by machines, a part in wheat, rye, or oats, with a soil easily prepared for the crop by horse plowing, and a part in Indian corn, cultivated by the plow or cultivator chiefly, and a small part in potatoes and roots. But still larger farming is required, and small farming is an evil in such a case as this, not uncommon in New England; take a mountainous region where the soil is poor and granite, the climate cold, where wheat cannot be cultivated and hardly rye and oats, where, however, grasses and roots flourish, and irrigation is easy from abundant streams, and the slope of the land—here is a region for breeding and fattening cattle and calls for large farming. Again, take a cheese farm, a branch of domestic industry, in which ten or twelve good cows suffice to give employment to a family in the country, without assistance; here you call for small farming; for who would wish the cares and help of a large farm to disturb the interior of one of these humble cottages so clean, so orderly, with an air that breathes peace and industry and happiness. But the whole secret of farming, large and small, be it never forgotten, lies in two words, Capital and Skill. Working capital is one of the chief agents of production. Three kinds of capital conduce to the development

of agricultural wealth. First, *sunk capital*, which is formed, in the course of time, by outlays of all kinds, often through successive generations, for bringing the land into good condition. Second, *working capital*, consisting of animals, implements, and seeds, &c. Third, *intellectual capital*, or agricultural skill, which is improved by experience and thought. In sunk capital—that is outlays through successive generations, for bringing the land into good condition—England is very rich,—New England very poor. Of working capital, England used to deem forty dollars to the acre sufficient; now, she deems eighty dollars to the acre not too much. New England deems that sufficient which the farmer happens to have. I shall not compare the intellectual capital of the two countries, lest I should hurt the feelings of my countrymen, or do injustice to our ancestor's children, who remain in the old home.

I do not claim that the agriculture of New England should be assimilated in all respects, to that of England. I know this is impossible, and I do not regret it. But I do claim, that we should learn, from English experience in agriculture, as we have in manufactures.

England has settled it, that agriculture cannot be conducted with success, without capital and skill. I do claim, that we should not attempt to get along without them, nor consider that our agriculture cannot succeed, till we have tried them. England has settled that agriculture cannot be rich, unless it maintains many animals, sheep, cattle and pigs, which enrich the soil that feeds them. I claim, we should consider this a settled axiom, as true here as there.

England has settled, that it is more than twice as profitable to feed breeds of sheep, on its farms, which are fit for the butcher at from one to two years old, than a breed that is fit for the butcher at from three to four years old; and that it is twice as profitable to raise breeds of sheep, which, when fit for the butcher, will yield from 80 to 100 pounds of net mutton, than a breed which will yield from 40 to 50 pounds. England has further shown, that there are such breeds, and how they may be produced. New England, I claim, must take notice of this fact, and act upon it.

England has shown similar results in cattle. England has shown that her agriculture is rich in crops, and enriched by crops, according as she connects the operations of three or four years together, by a rotation of crops. New England must adopt a system or rotation of her own, or show that England does not produce the results claimed by her system, or that a similar system will not produce similar results here. The English system is, first year, roots; second, barley or oats; third, clover; fourth, wheat. Is there no Arthur Young who can settle ours in New England? If we believe the Quakers, our Arthur Young must leave wheat out of our rotation; for some of that sect have maintained that we have never been able to raise wheat in Massachusetts, since we hung the Quakers. Our crime was bad enough, and its punishment has been severe enough if it has been the curse of our wheat culture; but I would recommend that we try a somewhat more systematic culture, before we acquiesce in the Quaker doctrine.

England has established breeds of milch cows, which give three or four thousand quarts of milk

in a year; and her cows average nearly double the quantity of ours. New England must establish similar breeds, if it would have an agriculture as rich as England's, in milk, butter and cheese. England has shown that an agriculture can not be prosperous in which the animal produce falls short of the vegetable produce; and the agriculture of Ireland and France confirm this truth. Yet the live stock of New England is said to be diminishing.

England has shown what can be done for wet lands and a moist climate, by drainage. How long are our wet lands to have their fertility obstructed by standing water? If our uplands need not drainage, like those of England, they need deep tillage.

England has shown what cultivation with capital and skill can do for a soil not naturally superior to that of New England. Are we to despair of our soil, because it remains sterile, when we have not cultivated and enriched it? England has shown that the love of country life gives vigor to a race, and strength to a nation. Are we to learn the same lesson, after we have wasted our strength in cities, and lost the freshness of our natures, in the dusty paths of gain?

I come now to the most difficult question, which perplexes many minds, and spreads despondency over many households in New England. Can agriculture be made profitable as a business, and followed as an occupation, with a reasonable hope of bettering one's condition in New England? If the farmers of New England should testify that they had found it a profitable pursuit, and state what these profits have been, this would be the most satisfactory settlement of the question. I suppose their testimony generally, would be that they made both ends meet, and but little, if anything more; at least, this would be the general testimony, though in some parts of New England it would be less satisfactory than this. But if the farmers of New England testified that they could not get a living by farming, this would not settle the question that farming could not be made profitable in New England, because it might be they had not adopted the right system, or had not employed capital enough, or skill enough, or had not the best and most profitable breeds of cattle on their farms. Let us approach this question from the English side, and by comparison; and see whether English farming is profitable, and how, and from what causes, and what advantages the English farmer has, and what disadvantages we labor under.

Farmers in England are, generally, tenant farmers; who hire the farms they cultivate, and pay rent. They form, there, a class of men, early educated to farming, and who devote their whole lives to it. These men are not exactly laborers, but are in comparatively superior circumstances, and quite intelligent. Farming is their profession, with all the chances of loss and gain; and if the chances of loss are sufficient to keep their attention awakened, the chances of gain are also sufficient, to excite their emulation. England has many examples of fortunes made by farming, which induce many to become farmers by profession; while, at the same time, it is one of the most agreeable, the most healthy, the most honorable professions in which mind and body can be engaged. These farmers live, for the most part, in a quiet, comfortable style, have their newspapers and periodicals, and produce, occasionally, on their tables, a bottle of claret or

port. When visiting the country in England, one meets with a hospitable reception from these kind and simple families, who have occupied the same lands for several generations. The most perfect order reigns in their domestic economy, and everything in their houses is conducted with that habitual regularity, which indicates long usage.

Now these farmers in England realize from three dollars and a half to seven dollars and a half per acre, as their net income, or profit, after paying their landlords from five to ten dollars the acre, as rent, and after paying about two dollars an acre, as taxes. They have no desire to change their situation, because they get the net profit stated, employing a working capital of their own, on which they also get interest, of about \$4000, on a farm of from 100 to 150 acres; whereas, to be a proprietor, the farmer would be obliged to invest from \$15,000 to \$20,000 in the farm in addition.

Now, I suppose it will be conceded, that where a man is proprietor of his acres, as he is in the United States, as well as the farmer of his acres, and has as much skill as a tenant farmer, the same capital to carry on his farm, and as good a farm, that no mode of farming can compete with proprietor farming.

The wages of a farm laborer in England are from forty to fifty cents a day, probably now fifty. The prices of farm produce in London, to wit, hay, wheat, mutton, beef, milk, &c., do not average higher than in Boston. The price of farming lands in England, are more than double the price of farming lands in New England; but much richer in *sunk* capital.

Taxes in New England probably do not exceed fifty cents an acre, on farming lands; while in England, they are two dollars an acre. Farm laborers' wages in New England are double what they are in England, that is, a dollar a day.

Now, here are the elements of calculation or comparison, to determine whether the same farming which is profitable in England, could be profitable in New England. Observe, I say the *same* farming; for we cannot expect poor farming, without capital and skill, to be profitable in New England, while only good farming, with capital and skill, is profitable in England.

In cost of land, the New England farmer has, I think, the advantage, even after he has enriched it; in taxes, he has the advantage; in markets, equality; in wages, he pays double. Can the disadvantage the New England farmer labors under in the rate of wages be overcome? One would think that a proprietor farmer, in New England, might arrange a system of farming which calls for the least manual labor, and pay a dollar a day for labor, and do more than compete with an English tenant farmer, who pays a heavy rent, heavy taxes, and fifty cents a day for labor.

I can point to many a farm in England, of 150 acres, on which the tenant farmer pays \$1200 a year rent, \$300 a year taxes, and what are there called good wages, and clears, without much trouble, \$600 a year. But here are the elements of his success—not better markets than ours, but a good stock of sheep of the best breeds, early fit for the butcher, yielding 80 to 100 pounds of net mutton, and a good fleece; the best breeds of cattle, of similar qualities, the best breeds of cows and of pigs, his farm cultivated with a proper rotation of crops, with proper proportion of meadow and pas-

ture, the farming not high, but such as the most judicious and economical man would approve. Would such a farm, thus cultivated and stocked, in the hands of a New England proprietor farmer, of equal skill, pay—wages being a dollar a day? If it would yield no profit, then our agriculture is, and is likely to be, in poor condition; if it would yield a remunerating profit, then we may yet have a rich agriculture.

To make more distinct the different results which we should have in New England, if we covered our farms with the best breeds of sheep and cattle, as the English do, that is, breeds of great precocity, and yielding the greatest weight of meat at the earliest age, I make the following statement, which is the result of pretty accurate calculation, and will bear, I think, examination, and make clear that we may have success in our agriculture, if we will imitate those who have succeeded. The markets in England and New England being equal in price for mutton and wool, and allowing what is not true, that we get as heavy a fleece from our sheep as the English do from theirs—for every fourteen dollars our farmer realizes from a flock of sheep, the English farmer realizes from a flock of the same number, thirty-six dollars; or where our farmer realizes fourteen cents, the English farmer realizes thirty-six cents. And in regard to cattle, oxen and cows, where our farmer, from their milk, and meat, and work, realizes \$28, the English farmer, from the same number, realizes \$36; yet the English farmer never works his oxen. In the one case, the English farmer has an advantage of more than a hundred per cent., and in the other, of about twenty-five per cent. What wonder, if these things be true, that English agriculture is profitable, and our agriculture unprofitable?

Some now living can remember when it was stoutly contended that we could never carry on manufactures to advantage; but time has proved their predictions false. Agriculture is only another and higher branch of manufacturing, carried on by skill and capital, proportioned to the acres cultivated; and when the capital and skill of New England shall turn in this direction, and the love of the country, which is natural to our race, shall return to our bosoms, the present feeling of despair respecting New England agriculture will vanish away.

Agriculture is an art of slow growth, not a science; though science may, and has contributed to its progress, in a degree. In its first stages, agriculture is imperfect and poor, depending almost wholly on the natural fertility of the soil, and poor methods, and not on the skill and capital of man. In this stage it remains, until commerce and manufactures have developed themselves. Then it is found that to feed the cities, and towns, and plains, where manufactures have fixed their seats, agriculture must be developed into an art, requiring skill and capital, as much as any branch of manufacture. If, after manufactures and commerce have been developed in a State, the people have not energy and skill, then, to bring agriculture to a higher development, the whole State languishes, and individual distress, poverty and emigration prevail, and national decay follows. Wise and good men have thus far, watched agriculture in New England, through its primitive stage, in which it relied on the natural fertility of the soil, and as this wore out, have seen the rural population grow thin through emigration,

and by engaging in commerce, and navigation, and manufactures; and these good men have not despaired, but have been diligent in stimulating the agricultural spirit of the people, by organizing agricultural societies, establishing agricultural publications, invoking the aid and patronage of the State, importing the best breeds of cattle, and used every method and endeavor to inaugurate in New England, the second stage of agricultural development, in which skill and capital make agriculture the fruitful mother of harvests and of men. These men have never been wanting in hope, and faith, and patience; and others will see, if they do not, the results of their works.

M.

TRAVELING POWERS OF THE CAMEL.

Prof. Marsh, of Burlington, Vt., has recently issued a work on "The Camel: his Organization, Habits and Uses, considered with reference to his introduction into the United States," a subject made of special interest at this time by the recent importation by our government of a number of these animals for the purpose of testing their capacities as carriers in this country. From this work we copy the following:

Mehemet Ali, when hastening to his capital to accomplish the destruction of the Mamelukes, rode without changing his camel, from Suez to Cairo, a distance of eighty-four miles, in twelve hours. A French officer in the service of the Pacha, repeated the same feat in thirteen hours, and two gentlemen of my acquaintance have performed it in less than seventeen. Laborde travelled the distance in the same time, and afterwards rode the same dromedary from a point opposite Cairo to Alexandria, a distance of about one hundred and fifty miles, in thirty-four hours. But the most extraordinary well-authenticated performance of the dromedary is that recorded by the accurate Burckhardt in his Travels. The owner of a fine dromedary laid a wager that he would ride the animal from Esneh to Keneh, and back, a distance of one hundred and twenty-five miles, between sun and sun. He accomplished one hundred and fifteen miles, occupying twenty minutes in crossing and re-crossing the Nile by ferry, in eleven hours, and they gave up the wager. Burckhardt thinks this dromedary would have travelled one hundred and eighty or two hundred miles in twenty-four hours without serious injury. The valuable paper extracted from the notes of General Harlan, and printed in the U. S. Patent-Office Report of 1853, Agriculture 61, states that the ordinary day's journey of the dromedary of Cabul is sixty miles, but that picked animals will travel one hundred miles a day for several days in succession, their greatest speed being about ten miles an hour. Captain Lyon affirms that the mahari of the Sahara will travel many successive hours at the rate of nine miles an hour. The Syrian defoul goes in five days from Bagdad to Sokhne, a distance which the loaded caravans require twenty-one days to perform, or from the same city to Aleppo in seven, the caravans generally taking twenty-five. Couriers have ridden, without change of dromedary, from Cairo to Mecca in eighteen days, while the ordinary camels seldom accomplish the journey in less than forty-five.

Layard gives several instances of apparently remarkable performances, but as the distances are not stated, it is not easy to compare them with those recorded by other authors.

A late and apparently credible writer says: "I knew a camel-driver who had bought a dromedary belonging to a sheriff of Mecca, lately deceased at Cairo. This animal often made the round trip between that city and Suez, going and returning in twenty-four hours, thus travelling a distance of sixty leagues in a single day." The performance of the dromedary is rather understated by the writer. The actual distance between Cairo and Suez is eighty-four English miles, and the animal must consequently have accomplished one hundred and sixty-eight miles in twenty-four hours. He remained four hours at Suez to rest, and therefore travelled at the rate of eight miles and four-tenths per hour.

Upon longer journeys, the daily rate of the best dromedaries, though not equal to these instances, is still extraordinary. A French officer of high character in the Egyptian service, assured me that he had ridden a favorite dromedary ninety miles in a single day, and five hundred miles in ten. Mails have been carried from Bagdad to Damascus, upon the same animals, four hundred and eighty-two miles, in seven days; and on one occasion, by means of regular delays, Mehemet Ali sent an express to Ibrahim Pasha, from Cairo to Antioch, five hundred and sixty miles, in five days and a half. But the most remarkable long journey on record is that of Col. Chesney, of the British army, who rode with three companions, and without change of camel, from Basrah to Damascus, a distance of nine hundred and sixty miles, in nineteen days and three or four hours, thus averaging fifty miles per day, the animals having no food but such as they gathered for themselves during the halts of the party. These dromedaries averaged forty-five steps a minute, with a length of step of six feet five inches, giving a speed of about three and one-third miles the hour.

GRAVELLING MEADOW LANDS.

Many persons occupy portions of the autumn in reclaiming or improving their meadow lands, and among other modes resorted to, they apply to them gravel or sand. This has a favorable effect in several ways. It settles into the mud and makes it porous, attracts heat, and supplies silica to the grass. A few loads per acre will sometimes effect an astonishing change.

The operation, however, must be judiciously performed, in order to secure favorable results. The sand or gravel should be spread evenly, and a small quantity only, in a single year. A half inch in depth, at one time, and a similar amount applied each year for several years, would be of much greater service than the whole amount applied at once. Indeed, some meadows are ruined for all present purposes by the application of too much sand or gravel at once. The sand presses heavily on the mud of the meadows, excludes the sun and air, and makes the whole as cold and inert

as a dead lamb's tongue. Green mosses and fungi soon appear on the surface of the sand, and all other vegetation is forbidden to approach. The meadow has lost its activity, and never will recover it until sufficient time elapses for water brush to spring up, or until the meadow is plowed or bogged and the sand mixed with the mud below.

For the New England Farmer.

HOP RAISING, A FICKLE BUSINESS.

MESSENGERS. EDITORS:—There are causes, and effects which follow causes, that may be felt years after causes cease to exist. There are causes which lead to prosperity and those which tend to adversity. Hop-raising and hop-speculations, like lotteries, have made some wealthy and a larger number sorry. There is no production growing out of the earth liable to such fluctuations in prices as hops. Whoever raises hops, to sell, runs a gambler's risk, he has no assurance whether he shall realize fifty cents a pound, or lose his labor. Perhaps there was no town in this Commonwealth more celebrated than Wilmington for producing hops at an early period. In the latter part of the last century, almost every farmer in town had a hop-yard, and as hops grew in demand the raisers prospered, and from an almost utter destitution of money, that fascinating tempter began to circulate in such sums as to produce a giddiness in some of the heads of those who had been unaccustomed, only occasionally to have their organs of vision gratified by such a rare visitant. The flow of money into Wilmington from the sale of hops, was soon promulgated in the neighboring towns, and the hop excitement arrived at such a pitch that men might be seen from all directions bound to Wilmington to purchase hop-roots which afforded an other source of profit to the producer. As a consequence of ready sale at high prices, the hop fever became epidemic in all the neighboring towns, and finally extended to all the New England States and New York, till that business, like every other profitable business, was over-done, and the production was vastly greater than the demand, and hops fell from twenty-five cents or more, down to four cents a pound, or no sale, which made many a speculator regret his temerity. After losing their labor, and more besides, for one or more reasons, the farmers in their wrath would plow up their hop-yards and put their ground to a better use. When prices were high, yards would be multiplied; when low, they would be torn up. This course of action and reaction was followed by continued fluctuations from the highest prices to the lowest, or no sale at all. No produce ever sent into market has disappointed the expectations of farmers more than hops, nor no species of traffic ever entered into, proved more disastrous than hop-speculations.

Now, let us view other consequences. It is well known that hops are not a necessary of life, but used mostly as a luxury. At the time of the hop mania, hop-raising was the prominent subject of conversation. The merino or hen-fever never had a harder struggle to form a crisis than the hop-fever. Most of the farmers directed all their energies to the production of hops, which required all the manure that possibly could be robbed from the other crops, and of course but scanty crops of grain, English hay and meat could be obtained

from a cheated soil. Hops, like other bulky crops, exhaust the soil, they make no return to it in the shape of manure, and every tun transported from the town was reducing the value of the soil. Thus this delusive money-making business went on till most of the land would neither produce hops or any other decent crop. Scanty crops of English hay compelled the cattle to live on meadow hay, and who ever saw good butter or beef produced from meadow hay? Manure made from it was but a feeble restorative to land growing poorer every year under the exhausting system of hop-raising, and to this day the exhausting effects of growing crops which left no restoratives to sustain the soil are visible.

For a few years at the close of the last and the beginning of the present century, very few country towns of its size could boast of as much money brought in for produce as Wilmington, but this was done at a proportionate reduction of the value in the farms. The excitement produced by this sudden flowing in of wealth seemed to overpower reason, paralyze all inducement to regular industry, and make the wages of regular labor look like a "very little thing," and men whom we should have as little suspected, as the deacons of the Scottish covenanted, entered into hop speculations at the neglect of good trades, farms and every other pursuit of honest industry and plunged, in thoughtless haste, into the dazzling phantoms which promise wealth, till the last dollar was mortgaged and the character weather-beaten and looked upon with suspicion where veracity was required as a test. In consequence of money becoming more plenty, new ideas began to crowd out old ones, new desires to form, and new views and transports awakened in the craniums of those which we had supposed were proof against all sorts of changes and innovations. The most of the fortunes made so suddenly by hop speculations were as transient as Jonah's gourd, and I hardly recollect an individual who did not lose a part or all of the property which he had, by patient industry earned before the hop excitement took place; and it is a question in the minds of many thinking people whether Wilmington, as a town, is a dollar the richer for there ever having been such a thing in the world as a hop.

I was personally and practically engaged at hop-raising from 1792 to 1797, and though young, the impression of hop-raising and hop-gambling was indelibly stamped on my memory in such a manner that it will probably be one of the last things I shall forget.

SILAS BROWN.

North Wilmington, May, 1856.

THE CURCULIO.—An old friend, Mr. JOHN DUNLAP, at Chester, N. H., writes us that the stings of the curculio on fruit may be prevented by placing coals on an old frying pan, and when under the tree sprinkle sulphur on them so that the fumes will pass up and touch the fruit. He says this can be proved by an "ordained minister."

RURAL ECONOMY OF THE BRITISH ISLES.—The attention of the reader is called to the last of this series of articles, in another column. It is entitled "New England," and is a sort of summing up of the general argument of the series, or a comparison

between the agricultural practices of Old and New England. We are greatly indebted to the writer for the interest and value they have given these pages, and part from him with sincere reluctance. They have been widely copied, and their clear, practical and vigorous style, has undoubtedly arrested the attention of many, and given them new views of the importance of agriculture, as well as the true way in which to reap its profits.

For the New England Farmer.

THE RICH FARMER vs. THE POOR FARMER.

It is not my intention, in the few brief remarks I have to make under this head, to array these two classes, the rich and the poor, against each other, but simply to show some of the advantages which the rich farmer has over his brother of moderate means. This is the sense in which I use the term, poor farmer; not intending to convey the idea that he does not till the ground as well, and as successfully, according to his means, as his rich brother.

Let us suppose, at the outset, that they both possess equal skill and industry, and, also, an equal amount of land, similarly situated, and alike in quality and condition. On this supposition, let us compare the two together, and see which has the advantage in other respects.

In all the wide world the poor farmer has nothing but his farm and a few miserable old buildings, except a horse, a cow, a pig, a few hens, and, perhaps, a few old fashioned farming tools to work with. This is the whole extent of his resources, if we except his physical strength. With such slender means, he must do his best; and then he will not be able to compete with the rich farmer, who has the needful, the ready cash to do with. The poor farmer cannot procure new and improved implements to work with, or hire laborers, or purchase stock for his farm, or manure to enrich his lands. He needs a team, a cart, a plow, a harrow, and other implements; to procure which, he must either run into debt, or hire all these of the rich farmer. He has such a dread of being involved in debt, without the prospect of being able to pay, that he resolves, for the first year, to hire all those things which he cannot possibly do without, and which are absolutely essential to his success; and, by the most rigid economy, self-denial and persevering industry, he finds, at the close of the year, that, besides supporting himself and family, and paying all his incidental expenses, he has enough left to purchase a team for the ensuing year. By pursuing this course for a few years, he is able to stock his farm, to purchase a complete set of new and improved farming tools, and, not only to cultivate his land to better advantage, but to produce better crops than before. Having thus overcome the difficulties and discouragements which surrounded him at the outset, he now begins to feel that he has arrived at a position in his calling, in which he stands some small chance, at least, to compete with the rich farmer for the honors and rewards of productive and successful husbandry.

Now, with this account of the condition of the poor farmer, let us compare the condition and circumstances of the rich farmer, and see what great and peculiar advantages the latter has over the for-

mer. In the beginning of life, by our supposition, their lands are equal, as well as their skill and industry; but they differ in other respects. There is a great difference in their resources—the one is a rich farmer, the other a poor farmer. The rich farmer has abundant resources of every kind. He has cash enough and to spare; so that he is able to hire any amount of labor on his lands, to purchase the most costly manures, to try experiments of every kind, and to make whatever improvements he desires. His farm is well stocked with the best animals, horses, oxen, cows, sheep, swine, poultry, &c. He has wagons, carts, plows, harrows, cultivators, and all the best implements now employed in successful cultivation. But, were he destitute of all these, he would still be able to procure them, and still have money left for other uses. Such is his inheritance at the outset of life.

Now, will it be pretended by any one, that there is anything like an equality of condition between these two farmers? that the one stands just as good a chance as the other to obtain the highest prize at the cattle show, for the best cultivated farm, or for the greatest crop of any kind, on a given number of acres? This can not and will not be pretended, because all the chances of success are on the side of the rich farmer, who possesses all the means for producing the desired result. I am not complaining of this, I am only stating the fact. I do not know that I would if I could, have it otherwise. Perhaps it is best, on the whole, that there should be some rich farmers who are able to be at the expense of trying costly experiments, and of carrying forward cultivation to the highest degree of perfection.

It seems to be thought by some, however, that the perfection of agriculture consists in obtaining the greatest quantity of produce from a given quantity of land, without regard to the expense. But it appears to me that agriculture is good or bad, in proportion to the return it makes for the capital employed, which consists not of land only, but of land, stock and labor. In those places where land is dear, and labor cheap, the farmer expends much labor on a little land, and renders that extremely productive. The reverse is generally the case, where land is cheap and labor dear. There the capital in land may counterbalance the advance price of labor. As labor commands more money, and money more of the necessities of life, in one place than in another; so the laborer lives better, and rears a family more easily, in one place than in another. In my opinion, he is the best farmer who reaps the greatest profit from his capital, whether he be a rich farmer, or a poor farmer. In raising large crops of produce, for instance, it is always proper to consider whether the profits are adequate to the expense. It is easy enough to increase the amount of produce by a greater expenditure in labor, and in fertilizing properties. But, with the farmer of moderate means, the question is, and always should be, will it pay? JOHN GOLDSBURY.

TO PRESERVE HERBS.—All kinds of herbs should be gathered on a dry day, just before, or while in blossom. Tie them in bundles and suspend them in a dry, airy place, with the blossoms downwards. When perfectly dry wrap the medical ones in paper and keep them from the air. Pick off the leaves of those which are to be used in cooking, pound and sift them fine, and keep the powder in tight bottles.



SALEM NORMAL ACADEMY OF MUSIC.

The above Institution is situated about 10 miles from Norwich, and 13 from New London, in the rural town of Salem, Ct., and in one of the most pleasant valleys in New London County.

The Institution is designed for ladies only, and the only study taught is music. It was founded by ORRAMEL WHITTLESEY, about 16 years ago and under his auspices it has grown into public favor, and is now justly celebrated as a place where a thorough and practical musical education may be attained. It is retired from the noise and amusements of city life,—has an able board of teachers, and an unique system of instruction, well adapted to secure the purpose for which the school is established. Its usual number of pupils is about *forty*. It is emphatically a school among the farmers. Among the number of its pupils from year to year, I have noticed the daughters of farmers from different States of our Union. These young ladies have gone out from it accomplished musicians and teachers. At the recent anniversary, the graduating class consisted of twenty to whom the examining board awarded diplomas.

The young ladies who received diplomas, remain at the seminary one year. They practice on the piano, or other instruments five hours each day—and study the theory of music about three to five more, and are required to pass an examination in presence of a board of examiners before receiving the honors of the Institution.

Attached to the Institution is a farm of about one hundred acres, which is worked in a scientific manner under the direction of Mr. Whittlesey. Much of this farm is under very high cultivation, and furnishes the school family with every variety of vegetable and fruit in their season.

The expense of a musical education at this Institution is \$250. The time required *one year*. Students may enter the seminary at any time, and

there are no vacations, but an annual examination in August or September. E. R. WARREN.

Boston, Aug. 30, 1856.

For the New England Farmer.

SHALL I STICK TO THE FARM?

MR. EDITOR:—Believing that you are willing to make all due allowances for the writings of youth, I again venture to communicate with you on the subject of farming; not for the purpose of gratifying any vanity which I may have of seeing my thoughts occupy a place in your valuable journal, but for the purpose of laying before you my objections to farming.

In my former communication, I gave my objections in such a way that you were led to a misunderstanding of them, and consequently your kind remarks did not meet my case exactly; therefore in consideration of this fact, I will now attempt to give them in as clear a manner as possible.

In the first place the returns for labor spent on the farm are so small, that it becomes necessary for one who attempts to gain a livelihood from the soil—being without money and those sciences the knowledge of which are so indispensable to a thorough understanding of the art of farming, it seems to me a stranger might as well hope to find his way through Boston, blindfolded, as for a man to think he can progress in farming, and support a family as he should; especially, if he should have the misfortune to possess a large one—to employ every moment from early in the morning till late at night, in hard, physical labor, allowing himself scarcely a moment for study, unless you might call the perusing of a newspaper study, which, I am pained to say, is a great stranger in many of our farm-houses.

Here, Mr. Editor, is my great objection to remaining in the business in which I now find myself engaged; not because there is too much bone labor, as you seemed to think—but because there is too little mental.

If it were possible for one to start in this employment with so small a sum as you think sufficient, and so divide his time that a regular system

of study as well as work might be to him, you may rest assured, that I, for one, would never quit the farm. Perhaps you will answer this by asking me how much time the poor mechanic or laborer in the city gets for study? If so, I should answer that they can get at least three hours daily, with the assistance, also, of libraries, lectures, and that which is derived from association. Whereas on the farm, the ten hour system is not yet; libraries are not considered as things needful, lectures are few, far between, and poor at that, and associations for the benefit of the farmer, are among the things heard of, but not seen. With such thoughts as these, is it strange that the farmers' boys are restless, and their maidens sigh?

Now that I have given you a knowledge of my situation, likes and dislikes, I shall wait patiently for your advice, whether I had better "stick to the farm," or something else, until I have a knowledge as well as a purse sufficient to enable me to farm as farming ought to be done.

Yours respectfully, A FARMER'S SON.
North Bridgewater, Aug. 21, 1856.

EELS AND EEL CATCHERS.

One curious in eels as exposed for sale in the Fulton market, might follow up a portion of these esteemed fish, to Moriches Bay, on the south side of Long Island. There sixty miles from New York, and sixty rods from the Atlantic, in an almost fresh water bay about fifteen miles long, and from half a mile to three miles wide, these wiggle themselves by thousands into the traps set for them. The eel pot is a round basket 20 inches long, with a hinged lid at the top and a hole in the bottom. This bottom runs upwards, as do the bottoms of champagne and other wine bottles, fraudulently presenting size and space, but sadly diminishing capacity. This cone-shaped base, however, is a part of the trap. In the spring of the year small fish, taken near the Fire Island inlet, (the outlet of Moriches Bay) make bait for eels. In hot weather, the "horse-shoes" are rather the coarse appetizers man offers them. Those, without apology or perceptible hesitation, are chopped with axes into four parts. A pile of these quartered dead being heaped up in the bow, the boat is pushed out for the pots. High stakes set upright in a line, fifty feet apart, sustain the pots, which hang from them under water by ropes. The fisherman pulls up the pot into the gunwale of his boat, flirts open the lid, and if old as Methusaleh in his business, is sure to yield to curiosity, and peak in before he empties it. Out come eels and little fish, and the shelly or unconsumed part of the bait. The hole at the top of the conical bottom lets the eels in. The sides at the bottom, and the bottom's real bottom, (involution worse involved) prevent their getting out. Fresh bait is then thrown into the pot, the lid is quickly fastened, and the trap is dropped overboard. The eels meanwhile glide and crawl about the bottom of the boat in a fashion so snake-like, that a landman involuntarily lifts his boots from their approach. From stake to stake rapidly goes the fisherman, and empties and resets the traps. This he does twice a day. Forty traps will keep an active man busy during the season. Upon the statement of a grand-child of Neptune, to us made on Wednesday last, (his hands then affirmatively placed on an eel

trap,) twenty-five dozen eels a day are the customary catch for a fisherman. These are placed in tank, till a large wagon load is collected. They then go to an "agent," the first of the middle-men who stand between the consumer and the producer of these fish. This man has them skinned. Piled round the operator the eels are stirred into the sand, partly to make them gritty to the grasp, but chiefly we suppose to spoil the proverb of "slippery as an eel." The throat, with one quick *gaah*, is cut through to the skin on the back of the neck, the belly is then slit, and with a nice use of the thumb nails, and an artistic jerk with both hands, that eel's skin is off. It is a marvellously fast process. "Smart" skimmers will take the epidermis off thirty dozen in an hour. A cent a dozen is the price paid for this queer labor. The peeled fish are packed while yet wriggling, in ice, and taken by rail to New York. There they go into the hands of a "commission merchant" attached to some market. He sells and pockets ten per cent. of the gross receipts, and remits the balance to the "agent." This one deducts freight, charges for ice, and cost of skinning, then scales off six per cent. from the balance as his commission, and divides the residue among the fishermen. These net for their labor, according to the quality of their catch, and the season of the year, but from six cents to eighteen cents a dozen for the eels.

Three hundred dozen eels, minus their skins, are the ordinary daily shipment from Centre Moriches to New York, by the Long Island road. How many besides are daily sent from all other points in the circle of the north and south shores of the Island, the curious in fish statistics may cypher out. When they have finished, if the atmosphere before them does not undulate and wiggle with skinned eels, as the air waves and vibrates in summer against a heated wall—indeed if all Long Island is not undulating with a snake-like movement towards New York and the Fulton market, those statisticians have only figures of arithmetic in them—that's all.—*Evening Journal*.

TO CORRESPONDENTS.—We must beg the indulgence of correspondents for delaying the publication of some of their articles. Our paper is now so widely extended, and there are so many persons feeling a lively interest in the cause, and desirous of relating their views, or describing their experiments, that even the hurried season of summer and harvest finds us with an unusual press of matter. Articles on "A selection of 12 best varieties Strawberries," on "Wanted—less land or more labor," "Mineralogy," "Lunacy," "Reclaiming Bog Meadows," "Education of Farmers," "Mental and Moral Improvement," "Nuts for a Farmer's Son to crack," "The advantage of small farms," "Influences of clearing and draining on the atmosphere," "Green corn for soiling," "Corn fodder," and many others, are on hand, and for which we hope to find room soon. Short articles usually find a place sooner than long ones. We now have some numbering ten or twelve closely-written pages. The insertion of these would exclude *variety*, which we must give, in order to meet the wants of the general reader.

For the New England Farmer.

FARMING IN WESTERN MASSACHUSETTS.

BY PROF. J. A. NASH.

In the hundred or more towns in Berkshire, Hampshire, Franklin and Hampden counties, there are a few large manufacturing villages, a great many small ones, and still more little, unpretending establishments, where more or less hands are employed. Among the articles manufactured are woollen and cotton goods, whips in quantities sufficient to do as much whipping as ought to be done in the whole country, cigars, more than the whole world ought to smoke, plows, axes, cutlery, cultivators, harrows, steam engines, railroad cars, scythes, arms of all descriptions, tools for nearly all purposes, and too many other things to name, employing a great number of men, and paying such wages as enable them to be good customers to the farmer.

In this same district, there are two colleges, drawing their students mostly from out of the State. There are about five hundred of the college officers and college students, including the families of the former. There are two female seminaries, with at least five hundred persons connected with them, drawing still more largely from without the State bounds. And there are many male and female boarding-schools, of a high order, drawing largely from other States.

Besides these, there are the marble and iron of Berkshire, and the clay beds for brick and tile drains, which employ a large number of men, and yield a large revenue. And, further, this region is well supplied with professional men; and, though the people are considerably industrious, there are here, as everywhere else, some idlers, who nevertheless eat, and we suppose, pay for what they eat.

The farmers of this region, then, have a pretty good array of customers; and there is little ground of fear that they will not continue to have. Our fathers would have drained their swamps, cleared off the boulders from their uplands, and enriched their farms, if they could have seen as many customers at their door. But they could not. Never in their day was there a fair prospect before them, that they would be able to obtain a reasonable price for all they could raise. There was no reason in paying the lawyer fifty cents for a dunning letter in potatoes at ninepence a bushel, or in giving the merchant fifty cents a yard for India cotton, and paying him in veal, at two or three cents a pound. And since labor was higher in proportion to produce than now, I see not how they could have done better than to skim such parts of the farm from time to time, as could be skimmed with the least labor.

They lacked incentives to exertion; and as often as I think of their position, no manufacturing among them, no working of marble and iron, no colleges, seminaries, and boarding-schools, few mechanics, and not an overstock of professional men, I wonder, not that they became rather dull, a little *fogyish*, as we should deserve to be called, were we not to wake up to an appreciation of our altered circumstances, but rather that they retained so much enterprise as they did. No wonder that the old swamp by the barn afforded a lurking place for serpents and frogs. But that after the prices of the past few years, the frogs should peep out of the same holes, is too bad. Everything now goes to

assure the farmer that he will have a stable market; not as high, perhaps, as the past year, but high enough to make him a reasonable compensation for his labor. Now, then, he can improve his land with a fair prospect of being the gainer by it. He can borrow money, if need be, with no quixotic hope of being able to pay it, and retain a profit for himself, in the increased value of his farm.

If it be said that the great West will run us down with produce more cheaply raised, the answer is, that we have now a home market, and that it will demand all we can raise, aside from such articles as the West can compete in. There is enough for the New England farmer to do, that must be done among ourselves; the growing of heavy articles that cannot be transported, for low as transportation is, it must ever remain a complete protection against the West, on certain important articles, and those, in most cases, the very ones best adapted to his soil.

August, 1856.

QUEEN ELIZABETH'S DINNER.

A gentleman entered the room bearing a rod, and along with him another, who had a table-cloth, which, after they had both kneeled three times with the utmost veneration, he spread upon the table, and after kneeling again, they both retired. Then came two others, one with a rod again, the other with a saltcellar, a plate and bread; when they had kneeled as others had done, and placed what was brought upon the table, they too retired with the same ceremonies performed by the first. At last came an unmarried lady, (we were told she was a countess,) and along with her a married one, bearing a tasting-knife; the former was dressed in white silk, who, when she had prostrated herself three times in the most graceful manner, approached the table, and rubbed the plates with bread and salt, with as much awe as if the queen had been present. When they had waited there a little while, the yeomen of the guard entered, bareheaded, clothed in scarlet, with a golden rose upon their backs, bringing in at each turn a course of twenty-four dishes, served in plate, most of it gilt; these dishes were received by a gentleman in the same order they were brought, and placed upon the table, while the lady-taster gave to each of the guard a mouthful to eat of the particular dish he had brought, for fear of any poison. During the time that the guard (which consisted of the tallest and stoutest men that could be found in all England, being carefully selected for this service) were bringing dinner, twelve trumpets and two kettle-drums made the hall ring for half an hour together; at the end of all this ceremonial, a number of unmarried ladies appeared, who with peculiar solemnity lifted the meat off the table, and conveyed it into the queen's inner and more private chamber, where, after she had chosen for herself, the rest goes to the ladies of the court. The queen dines and sups along with very few attendants, and it is very seldom that anybody, foreigner or native, is admitted at that time, and then only at the intercession of somebody in power.

☞ It is less tiresome to walk than to stand still a given length of time, for in walking, each set of muscles is resting half of the time, but when standing still all the muscles are continually exerted.

MOUNTAINS OF IRON.

The mineral wealth of the region of Lake Superior is almost beyond calculation or even conception. Nature has here stored away her mineral treasures on so vast a scale, that ages will not exhaust the deposit, even after the continent becomes densely peopled. The rich copper mines of this region are already beginning to be unlocked; but perhaps it is not generally known to those who are acquainted with these mines only through the "copper stocks" which represent them at the Brokers' Board, that the shores of Lake Superior are also lined for miles by *literal mountains of solid iron!* While the copper is found in a pure state in veins, the iron is deposited in ore, and in masses. A late visitor to the region furnishes the *Chicago Congressional Herald* with an interesting account of what he saw. Proceeding by boat to the flourishing village of Marquette, he found that there was no mode of conveyance to the mines but one's own feet, or the rude cars, drawn by horses, constructed precisely like the "dirt cars," on which earth and gravel are transported on our railroads, but which here are used for carrying the iron ore from the mines to the shore. In one of these rough conveyances, seated on a pail and drawn by mules, we proceeded to the interior. The road however was excellent, being made of plank where the mules travelled, and laid with iron rails, on which the cars moved. What he saw, at the end of the route, is thus described:

"About fifteen miles south-westerly from Marquette, is a range of high hills, several hundred feet high above the lake, and at least two hundred feet above the land immediately adjacent. These hills extend forty or fifty miles, and are in outward appearance much like other hills, covered with earth and trees. But they are in truth *mountains of iron*. When the thin covering of earth is scraped away—which earth is perhaps from six inches to three feet in depth—the rest of the mountain is solid iron ore. There are no veins, no rocks, no earth, no admixtures of any kind whatever, but iron ore; and ore, too, of the very richest kind. It yields iron of the very best kind, said to be of tougher, stronger quality, than the best iron from Russia, or from Salisbury. The per centage of pure iron extracted from this ore, is seventy-five per cent.

"There is no skill or expense hardly required in mining. For no excavations are needed; no drifts, shafts, nor adits, no machinery nor artificial power. When the earth is scraped away, the whole side of the mountain of solid ore is exposed, like an enormous stone quarry. A single blast will loosen many tons, perhaps thirty or forty, from the precipitous side of the mountain. The laborers shovel the fragments into barrows, wheel them two or three rods to the cars waiting on the road, and the work is done.

"The mere inspection of the mines reveals nothing very remarkable. One sees only vast masses of rock, such as one may see in any common stone quarry. But the wonderful fact is, the immense masses of mineral wealth here deposited. In this

one deposit is iron enough to supply the whole world for thousands of years. Here is revealed the magnificent profusion of the great Author of Nature. One wonders where are the gigantic laboratories where were mingled, and whence were sent forth, the untold masses of iron ore. One reflects, too, on the immense wealth which for ages can be extracted from these mountains of iron; wealth more durable and valuable than that which comes from the mines of California."

LETTER FROM MR. BROWN.

New Ipswich, N. H., Aug. 21, 1856.

DEAR SIR:—A severe easterly storm has shut me up closely here yesterday and to-day. For nearly forty-eight hours the fall of rain has been incessant; the stage travellers report the streams full, roads flooded and badly gullied, and fears are entertained that some bridges are gone.

In my last I spoke of the tendency of New Hampshire lands to go back, first to grass and then to forest lands. A fellow-traveller, detained here, from Hillsboro', states that twenty farms in that town have been deserted, and probably will never again be occupied by man; while a resident of this place informs me that on a single mountain tract in this neighborhood, ten farms are deserted, and the buildings are in ruins! Such are the striking features all over this region of country.

New Ipswich is a pleasant and thriving town. It has a good clayey loam soil, watered by the Souhegan river, and numerous small rivulets, which afford abundant and valuable water privileges. The first cotton factory erected in the State was put in operation here in 1803. An Academy was incorporated here in June, 1789, which has flourished to this day. It has numerous stores and shops of various kinds. The population is less than two thousand, but active and intelligent.

The storm has been too severe to visit farms in the vicinity with comfort; but I could not resist the inclination to look at Mr. PRESTON's stock and lands, of which I had heard favorable reports before. I found him quite ready to gratify my wishes, and any thing but an "umbrella man," for the storm seemed to give him no sort of uneasiness. His farm and stock are not only a credit to him, but an honor to the art of agriculture. A brief account of the management and products of a single field will give your readers a pretty correct idea of what he has been doing.

The field in question contains nine acres, and at the time he first plowed it would not summer two cows. It was very stony. He first plowed one-half and sowed oats, without manure; but a crop of 35 bushels per acre showed the natural strength of the soil. Stones were removed and the remainder of the field plowed. A barrel of plaster was applied to the oats after sowing. In the autumn 25 ox loads of manure per acre were applied to

the half first plowed, and the next spring sowed with oats and grass seed. The crop was 50 bushels to the acre; this course was pursued until the whole field was in grass. He mowed this field six years, and obtained a fair crop. He then plowed, applied 30 loads of manure per acre, planted corn and got a yield of 50 bushels an acre. After corn one year, wheat was sown in the spring, and on the first half 20 bushels, and on the other 26½ bushels was obtained. The land at the same time was seeded to grass. Last year, on eight acres of this field, he got 196½ bushels of wheat, and this, *twenty-four tons of hay!* The second crop, we should judge, will yield a ton to the acre.

Mr. Preston states that the hay on the whole farm when he purchased it in 1840, did not exceed 15 tons, and that this year, up to the date of this letter, he had cut and got in seventy-five tons, and had much more waiting for fair weather.

The cows and heifers which we saw on his farm, are crosses of native Durham and Ayrshire. Five of the calves are half Jersey, quarter Ayrshire, eighth native and eighth Durham. Most of them are half Ayrshire, quarter Durham and quarter native. This cross is, he says, very satisfactory. Of the 44 cows and heifers which we saw, two only are above the age of seven years, and nearly all four years old and under.

We have seen a good many dairies in New England, and several south, where great pains had been taken with them, but no one, containing so large a number, of so much marked excellence. The casual beholder would be quite likely to say that their ribs and hip bones were too prominent; but the skilful herdsman would instantly recognize the strongly marked milking qualities in a large majority of them. Mr. Preston is a lawyer, and like all men who mean to make the world a happy and progressive one, is called on to do and say a thousand things about town and State affairs, and banks and railroads, and every thing else. Yet he has found skill and opportunity to make a thousand spears of grass grow where only one grew before, and what is exactly to the point, *has made them grow profitably!* We are inclined to think that success is *not entirely* due to him,—for we found his wife enamored of the farm, conversant with stock and soils, plants and flowers, acquainted with theories as well as stubborn facts, and ready to criticize sharply the errors of the field or the barn. With such an auxiliary, who couldn't be a good husband—man?

Truly yours, SIMON BROWN.

Joel Nourse, Esq.

CHEAP DISINFECTANTS.—For all we have said on this subject, we have frequent inquiries respecting the best and cheapest substances for removing offensive odors in sinks, &c., during hot weather. Half a pound of sulphate of iron (copperas) dissolved in a pailful of hot water and

thrown into a sink, will remove the offensive effluvia. Chloride of zinc and chloride of lime are better, but much more expensive. Three cents worth of copperas applied every week in the manner described, will keep down offensive odors in a pretty large sink.

We say it with all seriousness, that there are thousands of persons in our cities who should be hung up by the ears for being ignorant of, or neglectful in not applying this cheap disinfectant.—*Scientific American.*

THE WEATHER AND ITS SIGNS.

There is no subject of more importance, and yet there is none with which men of science, and others, are so superficially acquainted, as that indicated in the above caption.

The heat of summer and the cold of winter, the rain and the snow, the thunder and the lightning, the hurricane and the gentle breeze,—how many mingled associations of pleasure and grief are connected with these. Our enjoyments, yea, our very existence, it may be said, are dependent on those operations of nature, which we call *the weather*.

Sometimes, as in 1854, the clouds will refuse their refreshing showers for a long period, and over extensive tracts of country the grass withers, and the lowing kine perish for want of the water-brooks, and then famine comes and desolates many once happy homes. Sometimes, again, the clouds will pour down their torrents for long periods, and the floods will come and sweep resistless over broad lands, carrying the crops of the farmer from his fields, and his flocks from the vales. Again, the hurricane will sometimes come on swift wing, bearing destruction in its pathway; and, if accompanied with red bolts of lightning, may consume well filled barns and storehouses, and level many beautiful dwellings to ashes. Were those weather changes governed by immutable laws, and were we well acquainted with these, we might adopt special means to meet special ends, and provide against the coming drouth, the floods, and the hurricane. Hitherto the weather has been considered fickle as the human temper, and if it is governed by fixed laws, the whole world lieth nearly in gross darkness respecting them. The sky may be cloudless to-day, and to-morrow, yea, in a few hours, the lightning and the tempest may come, and no man living, so far as we know, can predict the event with certainty.

The astronomer has watched the motions of the distant planets, has weighed them in a balance, and can tell the exact period when the moon, after a long interval, will hide the sun's rays from the earth by day; and also when the eccentric comet, after long journeys in unseen regions of space, will revisit our system again, but he cannot positively tell the particular atmospheric changes that will occur to-morrow in the city where he dwells; and yet a correct knowledge of coming atmospheric changes would be most useful to all men.

Can such information ever be obtained? Not unless such phenomena are governed by fixed laws. Well, when we consider that the planets roll, and the tides flow by immutable decrees, can any person doubt that the weather is governed by fixed law? That such laws do exist, no one in his senses can doubt, and that they will yet be discovered, we have as little doubt, and it is a shame that so little has been done to discover

them. We are glad, however, that something has been done, and there is a promise of more. Various stations have lately been established in our own country for taking meteorological observations, and all the leading nations of Europe have also entered upon the same course of investigations. Such observations extending over various parts of the globe, and for a number of years continuously, will no doubt lead to astonishing results. Already, by private enterprise and keen observation, Prof. Espy and Mr. W. C. Redfield, of this city, have made valuable discoveries relating to gales and for navigators, regarding the rotary progressive course of tornadoes, which have proven to be of great benefit, by teaching seamen how to withdraw from their power. The spots observed on the sun's disk take place at regular intervals, and these, Sir Wm. Herschel asserts, affect the weather on our globe to such a degree as to regulate the very price of wheat. Lieut. Maury has done much to reduce the weather changes on the ocean to a science. It is believed by Humboldt and other eminent philosophers, that the sun is the source of magnetism as well as heat, and the vibrations of the magnet are to our globe, as the beating of the pulse to the human system.

In an article in the last number of the *North British Review*, believed to be written by Sir David Brewster, he says, "Had Hipparchus and Ptolemy made their observations, and had they also been made by their contemporaries and successors in different parts of the world, we might now be predicting the weather with as much certainty as we do the planetary motions." The great number of meteorological observations now being made in various parts of the world, inspire us with hope that such a result will yet be accomplished. We hail every effort that is made to reduce "the weather and its changes" to a positive science, because, as we have already stated, such knowledge will be most useful and important to all men.—*Scientific American*.

For the New England Farmer.

THE BRUMAL RETREAT OF THE SWALLOW.

BY S. P. FOWLER.

MR. EDITOR:—It is not my intention again to attempt to prove, that swallows do, under peculiar circumstances, hibernate in trees, and at the bottom of lakes and ponds. This fact is as well authenticated, as many in Natural History.

There always have been, and are still, distinguished naturalists and travellers, who believe in the brumal retreat of the swallow, and who possess facts, to confirm them in their belief.

I am in the possession of more information upon this subject, than when I wrote the articles upon the swallow, contained in the 5th volume of the *New England Farmer*. One of the principal reasons for disbelieving in the hibernation of these birds, is, that having such powers of flight, it is absurd to suppose they would not use them, and migrate to warmer climate, in autumn.

This habit of the swallow may seem strange, but not more so than habits peculiar to some other birds. The same form of argument, which some of your correspondents have used, to disprove the belief, that these birds, in some instances, are found at the bottom of ponds, because they have good

wings for migration, would lead these persons to believe and assert, that the cow bird (*Icterus peccoris*) always made a nest of her own, as every bird in this country is known to do, because it is capable of doing it. What! it may be said, does a bird having proper anatomical structure, and possessing the same functions and capacities as others, fail to prepare a dwelling-place, and provide for the wants of her young, and leaving them to be reared by strangers, lead herself an idle, vagrant life?—Away with such absurd notions, they are not worthy of refutation. And if I should say, I am acquainted with a native plant, the (*Apocynum*), that had a contrivance, like a steel trap, set at the bottom of its corolla, by which flies and small bees were caught by their tongues or proboscis, and there held, until the poor things perish, it would probably be said, who believes that? so contrary to nature, and furthermore, of what possible use would it be to the plant, to possess the power to do this cruel act.

Now, I would say to such unbelievers, that nature, as I have observed her for many years, is sometimes queer. That the causes of some of her operations are frequently beyond our comprehension, and she sometimes, though not often, contravenes her own laws; and we had better, if we are her students, come to the conclusion, to believe all well authenticated facts in her history.

Danversport, Aug. 26, 1856.

For the New England Farmer.

SELECTING SEED CORN.

MESSRS. EDITORS:—In looking over some of your back numbers, I found an article on seed corn, signed H. Stratton, and as I am always pleased to read articles that tend to instruct, I will begin by using the writer's own words. First, "It is a law of nature that like begets like in the vegetable kingdom. This being a fact, I base my remarks upon it. Whenever you find a stalk of corn that has two ears on it, you will find that the top ear is from four to eight days earlier than the bottom ear; there being this difference in the setting of the ears." Now I do not say that that is incorrect, but is something different from what I have observed. I have been accustomed to select my seed corn from stalks that have two or three ears on them, and from those stalks of smaller growth, above the ears, and saving both the first and second ears, and planting both. I select to plant, those ears that are as large at the top as at the stem, or nearly so. I have planted one kind, the large kernel, round ears, fourteen years, and I have never been able to discover why I did not have as early corn, and as many bushels to the acre, as my neighbors. Two years ago I changed my seed corn, and bought the long eared, eight rowed corn, so called, taking it from the crib as it was gathered promiscuously from the field. In the fall when I came to gather my corn, I found but few stalks with two ears on, and the second ear not in a single instance as large as the top one; yet, I planted the second with the top one, about equally. Last fall, when I came to top my stalks, I noticed, on almost every hill, from one to three stalks with two ears on, and not unfrequently, three ears, and also that the second ear was the larger, and in some instances, the top ear, which was not the case the year before.

Upon the principle that we begun upon, that like begets like in the vegetable kingdom, the nearer the ears start to the ground, the less stalk, and the longer time it has to ripen, and the more ears will grow on the acre. Now, as like begets like, so in saving the top ear year after year, will not your corn ear out some six feet high? I have often noticed pieces of corn, after topping, with ears standing from four to six feet high. I try to select from stalks where the ears stand not more than two to three and one-half feet high, and yet produce larger ears. The way I select my seed corn, is, when topping, or cutting up at the bottom, I find a stalk with two or three ears, and stalks not larger, but forward in ripening, I leave it standing as it grew, for a week or so, and then cut up at the roots, bind and stack them a week or two, then gather, and trace, and hang them up. I have practised in this manner for years, and have never had a failure in my corn coming up. From the 1st to the 8th of May is the time I plant, and I have not had a crop of corn injured by frost in thirty years.

Southwick, 1856.

L. D. F.

For the New England Farmer.

NEIGHBOR DUMPDIRT'S DAIRY.

MR. EDITOR:—As I sometimes write a little for the papers for recreation, I propose to furnish you with an account of the dairy of my neighbor Dumpdirt, knowing that he can never find time to favor you with an account of it himself.

You have probably seen my neighbor Dumpdirt somewhere, most likely on the way to market, for he is there more than anywhere else, for he goes often and is a long time about it. Not that his farm produces more than his neighbor's, but I have thought it was because he took so much pleasure in marketing; and thus when his wife churns or the children find a hen's nest, he harnesses up his old hammer-head horse and commences to work his passage to Donklin Falls.

But it is not with Dumpdirt or his horse that I have to do now, but his dairy; and to begin at the beginning, Mr. Dumpdirt has four cows—the oldest the mother of the others. During the winter they are fed on straw and poor hay, for Dumpdirt thinks that feed good enough for cows that don't give much milk, and he don't want them to give much milk in the winter, for he has a theory that they will not give so much in the summer if they do. He will not raise turnips for his cows, for the butter will taste of them; he will not raise carrots, because it takes so much time in haying to weed them, and beets rust and do not come to much.

Under these circumstances, it cannot be expected that Dumpdirt's cows should come out in the spring so fat as others that are kept without regard to expense or profit. And they do not give so much milk when they calve, to be sure, but then "there is no great loss without some small gain"—it saves the trouble of milking and taking care of what milk the calves would leave, and it is about impossible to get the girls to milk in the tie-up, for they declare it to be too dirty for the hogs.

But soon after they are "turned out" they begin to "give down," for they have the range of the whole farm. As soon as the calves feel the benefit of the increase of milk enough to make them salable, they are disposed of by having their heads cut

off, and being dressed as well as Dumpdirt knows how, and carried to market.

Then Mrs. Dumpdirt begins to make her butter. The oldest of the children at home are girls, and they do the milking if Ben gets the cows at night, and if they do not get hungry and get out of the yard and "go to grass" before the girls are up in the morning. Sometimes they get out of the pasture and go away, and their bags do not ache enough to induce them to go home, and they "lay out." But Mr. Dumpdirt thinks it does them good to "lay out" a night or two in the spring, for it stretches their bags, and they are not so likely to leak their milk.

Now Dumpdirt's barnyard is not the cleanest that ever was, and the girls are so hurried to get through with the despised job of milking that they cannot stop to clean the cows, and it is rather discouraging work when no pains is taken to keep the yard clean. Some of this dirt finds its way into the milk-pail, and when it rains the water drops from the cow's sides into it also, and perhaps improves the color of the butter if not the flavor. But the Dumpdirt girls have a theory which they have learned from their parents, that it is the lot of every mortal to eat one peck of dirt during their life, and they think it makes no difference how soon they eat it, provided they do not know it at the time.

The heifer milks rather hard, and the girls have agreed that the one who gets her first cow done first shall have her choice of the other two, and the consequence is that the two first cows are not always "stripped" as they should be.

After milking, the milk is taken to the kitchen. The pans have been washed the day previous, and set up edgewise against the house to dry in the sun. The chickens run at large on the premises, and they run from the dough-dish and the swill-tub to the milk-pans, to catch flies. The chickens catching flies in the milk-pans, has nothing to do with making butter, but I mention it to show that one branch of business chimes in with another at Mr. Dumpdirt's. The chickens thrive, and the flies are destroyed.

The milk is strained and carried to the cellar, but Mr. Dumpdirt's cellar needs description, or the peculiar flavor of some butter could never be accounted for.

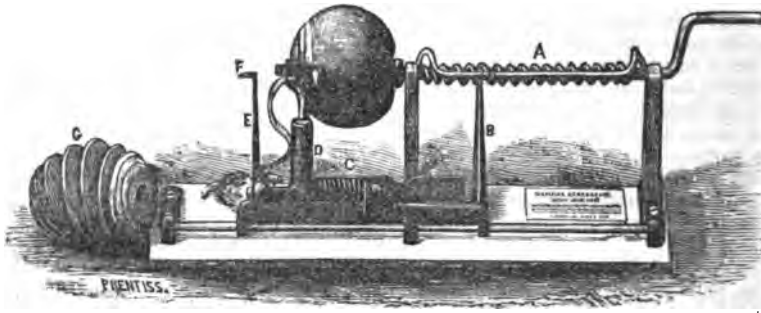
The drain, if there ever was any, is filled up by the rats, and as a consequence there is some water in the cellar the most of the year. To prevent wetting their feet, the "women folks" have carried down pieces of board, little and large, to step on. They have lain rotting in the stagnant water for years, and with other "culch" mixed among them. Then there is an old pork barrel, a beef barrel half full of brine, a soap barrel, a vinegar barrel, a cider barrel, and a dozen other barrels, many of them falling to pieces. Time would fail to tell of the firkins, pots and boxes, and bushels of decayed and growing vegetables and other stuff that are scattered around. The cellar windows, or rather the place where the windows ought to be, are filled with a row of little stakes driven into the ground outside, but notwithstanding all this precaution, the cats (and there are many) will creep in and skim the milk a little sometimes.

As the milk is needed for the pigs, it is skimmed and the cream put in an earthen pot which stands under the stairs.

Mrs. Dumpdirt uses the dasher churn, and when not in use, it is kept on the wood-pile, laying on its side, to prevent its filling when a shower comes. The other morning I was over there to get an axe lent to my neighbor, and the kittens were playing "hide and seek" in the churn. I do not mention it to show that Mr. Dumpdirt is dependent on me for any tools, but to account for the hairs that are sometimes found in the butter. It cannot be expected that butter will be *perfectly* clean when profit is an object in its manufacture, for too much

A NEW APPLE-PARER.

The Yankee mind is still prolific in invention, and it is not from the large and costly machines that the greatest benefit is derived: but from the small, and cheap articles, such as are required by every body, and so cheap that all may purchase them. Among these is *Whittemore, Harrington & Co.'s Apple-Parer*, figured above. It quickly and pleasantly performs the office of paring, coring,



time spent upon it would make it cost more than it would come to.

When the cream pot is full the churn is brought in, and, if it leaks, hot water is poured in until it is tight. The water is then poured out and the cream poured in. Then comes the tedious work of churning with a dash churn, having no idea how long it will take. And for some reason or other Mr. Dumpdirt's butter is rather uncertain about coming. If it comes in half a day or less, "well and good;" if not, she pours in cold water. Then if it does not come in a few hours she pours in hot water. If it does not come by night, she is sure it is bewitched, and tries various charms to break the spell, one of which is to heat a silver half dollar and drop it into the churn. Mrs. Dumpdirt is a firm believer in witches, and she often relates as positive proof of her belief, that once she was heating a half dollar in the fire, and all at once it disappeared, and she "never could find hide nor hair of it."

If the butter comes out, and it generally does after a while, it is taken out by hand and put into a pan of cold water, worked over and salted to the taste, and the balls made up by hand, and put into the butter-box, and it is ready for the market.

Mrs. Dumpdirt thinks butter ought to be salted as much as it will bear, for it keeps sweeter, weighs more, and lasts longer.

I have thus, Mr. Editor, given you some of the particulars of Mr. Dumpdirt's dairying. I do not say his ways of working it are all the best. Indeed, my own method and that of most of my farmer acquaintances are very different, though it costs a great deal of care and painstaking.

"If a thing is worth doing at all, it is worth doing well," is a rule my uncle Grisley often repeated to me when I was his plow-boy, and now I am my own man, I find the saying verified in most cases. But many persons hold the opposite, at least in practice, and being liable to err ourselves, are bound to respect their opinions.

GOOSEQUILL GREY.

Charlestown, July, 1856.

and slicing the apple at one operation, by merely turning a crank. It is simple in its construction, costs \$1.25, and may be purchased of *Blake, Barnard & Co.*, 22 and 26 Merchants Row, Boston.

For the New England Farmer.

FARMING.

MR. EDITOR:—In the *Farmer* of Aug. 9th, I noticed an article entitled "Objections to Farming." It really made my heart ache to read the sad story there told; if "A Farmer's Son" is short of money, as he says, and he intends to try to get a living without work, I am afraid he will be disappointed. He intimates pretty strongly, that a farmer has not the advantages of learning. Now, sir, I should think that must be a mistake. Why is a farmer without capital in any worse condition, as regards learning, than a mechanic in similar circumstances?

He speaks of ignorance and servitude as necessary associations of a farmer's life. It must be he is ignorant, or he could not entertain such an idea. Why, they are no more necessary to a farmer's life, than are drunkenness and idolatry. He asks who there is that is willing to toil six days out of seven. Stop—God hath said, "six days shalt thou labor," and "by the sweat of thy brow thou shalt earn thy bread."

From what "A Farmer's Son" says, I should think he considered farming one unending routine of pleasureless drudgery; then let me tell him he does not see things as they are; there are ten thousand pleasures which the farmer has, that the mechanic knows nothing of; the farmer has the pleasure of living continually in the midst of nature, and has her beautiful and glorious charms forever before his eyes; if he is insensible to these, he is not such a man as he should be. Perhaps "A. F. S." would say, "they have no time for such things;" but if they are careful how they use their spare moments, they will find more of them, and by using spare time judiciously, a farmer may make

his home beautiful, so that it will give him inward pleasure whenever he comes in sight of it. If there is a man in the world that enjoys life, that is *truly happy*, it is the nature-loving, honest, industrious, laboring farmer; he it is, if it is anybody, that is preparing for eternity; if his soul has not descended to a level with the brute, the influences that surround him will lead his mind up to the great Author of all the works and wonders of nature.

In the above mentioned article it is asserted that only a very few farmers can afford to have books and newspapers. Now, I should think that books and papers were as necessary to good and profitable farming, as good plows and shovels; and the man that does without them, cannot farm it as he should, he will be slack and shiftless, always behind time, and in consequence, takes all things to disadvantage, and never does a thing as it ought to be done. The motto, "a penny saved, is two-pence clear," applied to the buying of books and papers, would in truth and reality be "a penny saved is two-pence *lost*." "First," he says, "because we have no time to spare." Now, sir, the farmer that does everything at the right time, *will find time* to spare in the perusal of an agricultural paper or book; if he has so much land that it takes him all the time to get over the ground, without doing justice to one single acre, then he is certainly farming in a shiftless and unprofitable manner; for it is more profitable to have one acre well tilled, than to have five that are merely "gone over."

Yours respectfully, SIXTEEN.

OUT-DOOR AIR.

Many talk quite learnedly and eloquently on the importance of fresh air to permanent good health, but the rationale of the matter is not often explained so well as in the following article, which we find in an exchange. It is well worth a careful reading, for fresh air, in some places, and at some seasons, may prove pernicious instead of healthful.

Night air and damp weather are held in great horror by multitudes of persons who are sickly, or of weak constitutions; consequently, by avoiding the night air and damp weather, and changeable weather, that is considered too hot or too cold, they are kept within doors the much largest portion of their time, and, as a matter of course, continue invalids, more and more ripening for the grave every hour; the reason is, they are breathing an impure atmosphere nineteen-twentieths of their whole existence.

As nothing can wash us clean but pure water, so nothing can cleanse the blood, nothing can make health-giving blood, but the agency of pure air. So great is the tendency of the blood to become impure in consequence of waste and useless matter mixing with it as it passes through the body, that it requires a hoghead of air every hour of our lives to unload it of these impurities; but in proportion as this air is vitiated, in such proportion does it infallibly fail to relieve the blood of these impurities, and impure blood is the foundation of all disease. The great facts that those who are out of doors most, summer and winter, day and night, rain and shine, have the best health the world over, does of itself falsify the general impression that night air, or any other out-door air, is unhealthy as compared with in-door air at the same time.

Air is the great necessity of life; so much so,

that if deprived of it for a moment, we perish, and so constant is the necessity of the blood for contact with the atmosphere, that every drop in the body is exposed to the air through the medium of the lungs every two minutes and a half of our existence.

Whatever may be the impurity of the out-door air of any locality, the in-door air of that locality is still more impure, because of the dust, and decaying and odoriferous matters which are found in all dwellings. Besides, how can in-door air be more healthy than the out-door air, other things being equal, when the dwelling is supplied with air from without?

To this very general law there is one exception, which is of the highest importance to note. When the days are hot and the nights cool, there are periods of time within each twenty-four hours, when it is safest to be in-doors with windows closed; that is to say, for the hour, or two, including sunrise and sunset, because about sunset the air cools, and the vapors which the heat of the day have caused to ascend far above us, condense and settle near the surface of the earth, so as to be breathed by the inhabitants; as the night grows colder, these vapors sink lower, and are within a foot or two of the earth, so they are not breathed. As the sun rises, these same vapors are warmed, and begin to ascend, to be breathed again, but as the air becomes warmer, they are carried so far above our heads as to be innocuous. Thus it is that the old citizens of Charleston, South Carolina, remember, that while it was considered important to live in the country during the summer, the common observation of the people originated the custom of riding into town, not in the cool of the evening or of the morning, but in the middle of the day. They did not understand the philosophy, but they observed the fact, that those who came to the city at mid-day remained well, while those who did so early or late suffered from it.

All strangers at Rome are cautioned not to cross the Pontine marshes after the heat of the day is over. Sixteen of a ship's crew touching at one of the West India Islands, slept on shore several nights, and thirteen of them died of yellow fever in a few days, while of two hundred and eighty who were freely ashore during the day, not a single case of illness occurred. The marshes above named are crossed in six or eight hours, and many travellers who do it in the night are attacked with mortal fevers. This does, at first sight, seem to indicate that night air is unwholesome, at least in the locality of virulent malarias, but there is no direct proof that the air about sunrise and sunset is not that which is productive of the mischief.

For the sake of eliciting the observations of intelligent men, we present our theory on this subject.

A person might cross these marshes with impunity, who would set out on his journey an hour or two after sundown, and finish it an hour or two before the sun is up, especially if he began that journey on a hearty meal, because, in this way, he would be travelling in the cool of the night, which coolness keeps the malaria so near the surface of the earth as to prevent its being breathed to a hurtful extent.

But if it is deadly to sleep out of doors all night in a malarial locality, would it not be necessarily fatal to sleep in the house, especially if the windows and doors were closed? The reason is, that the house has been warmed during the day, and if kept

closed it remains much warmer during the night in doors than it is out doors, consequently the malaria is kept by this warmth so high above the head, and so rarified, as to be comparatively harmless. This may seem to some too nice a distinction altogether, but it will be found throughout the world of nature, that the works of the Almighty are most strikingly beautiful in their minutiae, and these minutiae are the foundation of his mightiest manifestation.

Thus it is, too, what we call "Fever and Ague" might be banished from the country as a general disease, if two things were done.

1. Have a fire kindled every morning at daylight, from spring to fall, in the family-room, to which all should repair from their chambers, and there remain until breakfast is taken.

2. Let a fire be kindled in the family-room a short time before sundown; let every member of the family repair to it, and there remain until supper is taken.

For the New England Farmer.

FISH IN ARTIFICIAL PONDS.

MR. EDITOR:—Some time since, I saw in the *N. E. Farmer* an inquiry with regard to the propagation of the trout in artificial ponds or reservoirs. I know nothing of the fish except from personal observation and experience, the relation of which may suggest useful hints to those who feel an interest in the subject.

I have in my garden a spring of pure water from which the earth has been excavated in nearly a circular form about 30 feet over, and in parts three feet deeper than the natural outlet; to this has been connected another reservoir, rather larger than the first, by a space 3 feet wide, the water in which is about 20 inches deep, the two ponds parted by a peninsula of oval shape about 15 to 25 feet in extent. I have in these ponds some 50 to 100 fine trout, varying from the size of the common brook trout to several specimens of more than a foot in length. The trouts confine themselves almost exclusively to the spring, and seldom, except in the spawning season, go into the shallow pond, keeping a large space perfectly clean from all mud, where they may always be seen of a sunny morning lying on the pure white gravel on the bottom, in a most amiable group, seemingly in the realization of a most perfect and quiet enjoyment. Earlier and later in the day each one betakes itself to its own hiding place, and watches for such insects as may fall into the water, or some juvenile frog that may venture within their reach, and which they are sure to add to their dinner. I feed them occasionally with angle worms, fresh meat and little fishes out up fine, &c. crumbs of bread and cracker they will not eat. The trout is not easily tamed; they know when one comes to feed them; and they will approach within six or eight feet, but they are alarmed at any quick or unusual movement, and will not be easily coaxed back again. My fish are very healthy and beautiful, and are objects of much interest to all visitors in the garden. The pairing season of the trout continues through the last weeks in October and first weeks in November, when they go by pairs, some into shallow corners about the deep pond, but mostly into the shallow pond, where they select separate places and stay by themselves two or three weeks, allowing

none to interrupt their dual society; on the approach of cold weather they again seek the deep water and resume their former habits. I have no doubt if the old fish, which are very voracious, should be entirely taken from the water, a million of little trouts would grow up in their place, but in my pond I have not seen them after the first few weeks in spring; I believe they serve as food for their parents.

The second pond through which the water passes to its final outlet, was intended and is used for a paddling place for some half dozen little children, who make a good deal of music about my garden, and it would do your heart good to see the delight, the splashing, and hear the shouts of the little rogues as they occasionally frolic in the mimic sea.

There is a growing inclination to experiment in the matter of fish raising, and if my little experience as related above, is in your estimation of any value, you are at liberty to use it. The present is a good season to prepare the ponds, and at the pairing season the fish can easily be taken with a net and transferred to it.

J. W. C.

Framingham, August 20, 1856.

REMARKS.—We are pleased with the above account, because we believe that every thing of this kind goes to make the world beautiful, interesting and profitable; for we do not yet think that *all* profit lies in dollars and cents. There is a *profit* to the heart and soul which has not yet been sufficiently considered; but where it *has* touched them, it shines forth in the very abodes of poverty, as well as in more pretentious conditions. Many of the mud cabins of the English peasantry, possess more true nobility of character than some of the towering mansions of the rich citizen; and their souls are more in unison with God and Nature, and they have a wealth of feeling, and love, and patriotism, which are strangers to many educated minds which look down on them with pity or contempt.

The great Architect has given us tastes to enjoy some things better, in forms or conditions different from those in which he has left them, and he who changes and makes them pleasant and attractive, merits, and will receive the public regard and approbation.

BREATHING AND THINKING.—Let any reader think for a moment of what he experiences when he breathes, and attends to the act. He will find that his whole frame heaves and subsides at the time; face, chest, stomach and limbs are all actuated by his respiration. Now let him *feel his thoughts*, and he will see that they too heave with the mass. When he entertains a long thought, he draws a long breath; when he thinks quickly, his breath alternates with rapid alternations; when the tempest of anger shakes his mind, his breath is tumultuous; when his soul is deep and tranquil, so is his respiration; when success inflates him, his lungs are as tumid as his conceits. Let him make trial of the contrary; let him endeavor to think in long stretches at the same time he breathes in fits, and he will find that it is impossible; that in this case the chopping lungs will needs mince his thoughts.

CONCORD JAIL.

GENTLEMEN:—I read with more than ordinary satisfaction the letter from your correspondent "Here and There," dated "Concord, Massachusetts, July 31." The revolutionary reminiscences connected with that old town must ever excite in a true American bosom feelings of patriotism, pride, and pleasure. There the first blood of the American Revolution was shed, and there lie buried the remains of those who fell; and tracing from the point of time when that momentous occurrence took place, the events and results of that war of independence; resting the mind for a moment on that glorious "Declaration" of our fathers, and then coming down "through all the past" to the present, what American heart swells not with admiration at the heroic deeds that have accomplished our present prosperity and happiness as a nation, and who is there with one particle of the spirit of '76 in his bosom who does not anathematize any wretched hope or purpose of a dissolution of the Union?

But I am straying from my object in writing this, which was to state to you a curious historical reminiscence connected with Concord. You are aware, I believe, that the pleasant residence of ex-Lieutenant Governor Simon Brown, formerly of this city, is on the banks of that same "sluggish Musketoquid" (Concord) river. Many a pleasant day has it been my lot to pass beneath his hospitable roof, and many an hour have I spent boating on that river, with fowling piece and rod and line; and the chowder I assisted in eating on its bank last summer, made by the Governor and equaling one of Daniel Webster's best, will not soon be forgotten.

Well, there hangs in one of the parlors of Gov. Brown's house a picture, in water colors, presenting a view, in admirable perspective, of Concord jail and the keeper's house as they were in 1778; and that picture is supposed to be by the hand of Sir Archibald Campbell, who was imprisoned in Concord jail during that year.

The picture was sent from England many years ago to a relative of Sir Archibald, and was presented to Gov. Brown by the family, and is carefully preserved by him. Under it is written, so far as I now remember, "*Concord Jail in America.*"

By reference to Stedman's History of the American War, vol. 1, p. 180, an account of the capture of "Lieutenant Colonel Sir Archibald Campbell," with his troops, will be found, with a letter from Sir Archibald to Sir William Howe, dated "Concord Gaol, 14th February, 1777." He describes his treatment, which appears not to have been very satisfactory, and describes very minutely the jail itself, and closes itself in the following words:—

"In short, sir, was a fire to happen in any chamber of the gaol, which is all of wood, the chimney stacks excepted, I might perish in the flames, before the gaoler could go through the ceremony of unbolting the doors; although to do him justice in his station, I really think him a man of humanity: his house is so remote that any call from within, especially if the wind is high, might be long of reaching him effectually.

"I have the honor to be, &c.

"ARCHIBALD CAMPBELL."

I confess to having looked upon that old picture, knowing all the interesting circumstances which at-

tended its production, and its final deposit in the very village where the jail once stood, with as deep an interest as I ever examined any picture in my life. The next day, full of the thought of it, I rode past the spot where the old jail was located, and so on, down to Cambridge, over the ground up which the British troops marched on the morning of the 23d of April, 1776, and over which they retreated so disastrously on the afternoon of the same day, "in which," says Stedman, "they were driven before the Americans like sheep."

One can hardly move in the vicinity of Boston without finding something to stir the memory and set the blood to tingling with thoughts of "those men of old" who suffered everything to found our Union, now so prosperous and which might be so happy.

B. B. FRENCH.

National Intelligencer, Sept. 1, 1856.

GARGET, OR INFLAMED UDDER.

The town in which we reside, as well as most of the towns in the vicinity, is strictly an agricultural town, and the attention of farmers has been turned for several years to raising milk for the Boston and other markets in that neighborhood. Of course, cows command a high price, the best are eagerly sought for, even into the States of Maine, New Hampshire and Vermont, and the skill of the producer is taxed to ascertain the best modes of feeding and sheltering, in order to produce the largest quantity of milk. Large sums are annually expended for oil and rice meal, corn meal and shorts, in addition to the best hay usually fed to them. On some farms, roots are raised in abundance and fed out, and care is taken of every kind to get as large a flow of milk as possible.

These cows run in pastures in summer, and are kept in clean and well ventilated stables in winter; they are carded, fed and watered regularly, appear healthy, and have nothing to do but to chew the cud of quiet contentment, and daily replenish the farmer's pails in return for his bounty and care. But under this systematic attention, the disease which we have named at the head of this article, often materially reduces the profits of the business. Various remedies have been resorted to, but have generally failed to produce any beneficial results. The present loss of milk is not all, for the cow affected does not always so entirely recover as not to have her value depreciated, and sometimes permanent defects are established.

A neighbor purchased a fine looking cow a few weeks since, for which he paid fifty dollars. For a week after getting her home, she yielded a good supply of milk, ate well, and promised to be all he expected. At this period, her bag began to swell, appearing to have hard lumps in it, and followed by a flow of bloody milk from one of the teats. The inflammation and hardness increased, until the cow lost appetite, and was altogether in a bad way. The gentleman then had reference to the bound

volumes of the *N. E. Farmer* for a remedy, and in volume 6, page 496, he found a remedy communicated by Mr. MINOT PRATT, of Concord, Mass., a very intelligent and carefully observing man. It is the use of *Aconite*, given by soaking a piece of bread in water where three or four drops of *Aconite* have been infused. He says he has never failed to cure when he has administered it. It was given in this new case, and with excellent results.

In vol. 7, p. 336, we have extracted liberally on this subject from Youatt and Martin. They recommend a wash in *Arnica* water, when the udder has received an external injury. But *Aconite*, if occasioned by a cold. See the article.

A small vial of the *Aconite* in solution, costing but ten cents, would be sufficient for any farm for a year; it is easily administered, and, in our opinion, is the remedy which should be used in the disease of which we have been speaking.

THE GREAT AGRICULTURAL EXHIBITION AT PHILADELPHIA.

The Philadelphians are wide awake in regard to the exhibition of the U. S. Agricultural Society, which takes place in that city next month. The local committee are straining every nerve to have the exhibition excel that held in this city last year. The following paragraphs from the Philadelphia *Inquirer* give some idea of the extent of the preparations made for the exhibition:

"The preparations for this exhibition at Powelton, Twenty-fourth Ward, are progressing rapidly. A very large number of workmen are employed.—A large portion of the fencing has been already put up. The grounds within the enclosure embrace an area of about fifty acres, reaching nearly to the wire bridge on the North, and upon the South taking in the ravine and the old cemetery near the Fairmount bridge. Upon the East the fence runs along the high water line, taking in the river road, and using up the former camping ground. A public road, thirty feet in width, will be left on the West of the enclosure between the latter and the Pennsylvania Railroad.

The ground will be double in extent that of the State Fair two years since. Many of the sheds are nearly finished, and they present quite a picturesque appearance, with their gable ends jutting toward the fair grounds. There will be stalls provided for twelve hundred cattle.

A prominent feature of the grounds is the course for the exhibition of horses, near the southern end. The track will be nearly level, and great care is taken to adapt it for the purpose for which it was designed. The ring is half a mile in circumference, and near it there will be a stand erected that will accommodate eight thousand spectators. Inside this ring the tent of President Wilder will be located. The tents for the different departments of the exhibition, for the officers, for the banquet, and for the use of the Reporters for the Press, will occupy appropriate places on the grounds. Some idea of the extent of the buildings to be erected may be formed from the fact that in addition to the tents and mar-

quees, over half a million feet of lumber will be required in putting up the necessary structures.

The entrance to the grounds will be at the northern and southern extremities of the area, and the exit gates will be located on the western side.

The exhibition will commence on the 7th of October. The Butcher's Association intend to celebrate the event by a grand parade, for which active and extensive preparations are making."

SUGAR.

The following statistics in regard to this article, which now commands an exorbitant price, will be read with interest. We copy from the *Traveller*. It will be seen that there is no scarcity of sugar, in the great markets of Europe and America, but, on the contrary, the supply is unusually large.

This old luxury, but now article of almost prime necessity, droops in price under the accumulation which a diminished consumption, produced by high prices, has caused.

The stock at New York is larger than was ever before known, and is very large in all the ports of the United States. In New York it is set down at 73,833 hhds. and 19,231 boxes, against 26,469 hhds. and 27,280 boxes last year; in Boston, 7,301 hhds. and 14,412 boxes against 692 hhds. and 6,325 boxes last year; in Philadelphia, 8,387 hhds. and 2,242 boxes, against 4,802 hds. and 2,450 boxes last year; in Baltimore, 6,534 hhds. and 2,582 boxes, against 3,255 hhds. and 2,817 boxes last year.

In Europe, including Great Britain, which is the great depot of supply for the Continent, the stock is not only larger, but the imports of the year thus far have been greater than last year, and the business is limited, with a dull market.

The imports into Great Britain, up to the middle of August, this year, were 584,400,000 lbs., against 462,400,000 lbs. last year; and the imports into the chief ports of the Continent of Europe are 442,000,000 lbs., against 454,000,000 lbs. last year. The stock on hand in Great Britain is 238,200,000 lbs., against 164,200,000 lbs. at the same time last year; and the stocks at the chief ports of Europe 48,100,000 lbs., against 75,700,000 lbs. last year. It will be seen that England has in store nearly three times the overplus necessary to make up the deficiency on the Continent.

The United States is a great sugar market, and a correspondent at Salem, who is well versed in the statistics of commerce, sends us the following statement of brown sugar entered into the United States in two years, namely:

In 1853, 456,510,627 lbs., costing \$14,639,776, on which the duties were \$4,391,929.

In 1854, the imports into the United States were 449,520,309 lbs., costing \$13,406,996, the duties on which were \$4,622,092.

Now, in 1856 the sugar costs double, and the duties under the *advalorem* rate are double also. Government does not want the money, and certainly when the Louisiana sugar crop is so almost entirely cut off that the planters have none to sell, we ought not to be subjected to double duties, but are rather entitled to have it on the free list.

Molasses now pays 9 cents a gallon duty, under the *advalorem* tariff, instead of 5 cents, as under the specific duty of 1842.

A NEW AFRICAN GRAIN.

In *Chambers' Edinburgh Journal* we find the following notice of a grain, obtained from the colony of Sierra Leone, Africa, which has recently been introduced into Great Britain:

"According to Mr. Clarke, Assistant Surgeon of the Colony, this grain, which is called 'fundu,' or 'fundungi,' is cultivated in the neighborhood of Kissy village, and in other parts of the colony, by industrious individuals of the Soosoo, Foulah, and other tribes, by whom it is highly prized. By the natives it is called 'hungry rice,' though neither in botanical character nor appearance does it bear the least resemblance to the rice of common culture. The fundu is a slender grass, with digitate spikes, and grows to the height of about eighteen inches.

The ear consists of two conjugate spikes, the grain being arranged on the outer edge of either spike, and alternated; the grain is attached by a short peduncle to the husk, from which it is easily separated. The grain which is codiform, (heart-shaped) and about the size of mignonette seed, is covered by a thin fawn-colored membrane; and when freed from this membrane, is whitish and semi-transparent. It is highly glutinous, and has a delicate flavor, between that of rice and kiln-dried oats.

The mode of culture is extremely simple. The ground is cleared for its reception by burning down the copse-wood, and hoeing between the roots and stumps. It is sown in the months of May and June, the soil being slightly opened, and again lightly drawn together over the seed with a hoe. In August, when it begins to shoot into ear, it is carefully weeded. It ripens in September, growing to the height of about eighteen inches; its stems, which are very slender, being then bent to the earth by the mere weight of the grain. The patch of land is then either suffered to lie fallow, or is planted with yams or cassado in rotation.—Experienced cultivators of this Lilliputian grain assured Mr. Clark that manure was unnecessary, nay, injurious, as it delights in light soils, and is even raised in rocky situations, which is the general character of the surface in and around Kissy. When cut down, it is tied up in small sheaves, and placed in a dry situation, generally within the huts of the natives; for, if allowed to remain on the ground and to get rain, the grains become agglutinated to their coverings. The grain is trodden out with the feet, and is then parched or dried in the sun, to allow of the more easy removal of the outer membrane (or epicarp) in the process of pounding, which is performed in wooden mortars. It is afterwards winnowed with a kind of cane fan—*ner on mata*.

In preparing this delicious grain for food, it is first put into boiling water, assiduously stirred for a few minutes, and the water then poured off. To the grain so prepared, the Soosoo, Foulahs, &c., add palm oil, butter, or milk, but the Europeans and negroes connected with the colony generally stew it in a close saucepan, with fowl, fish or mutton, a small piece of salt pork being added for the sake of flavor. This is said to make a very good dish. Sometimes it is made into puddings with the usual condiments, and eaten either hot or cold with milk. By the few natives of Scotland in the colony it is dressed as milk porridge. In either

form it is said to be excellent; and Mr. Clarke is of opinion that could it be raised in sufficient quantities, it would become an important article of commerce, as it would prove a valuable addition to the light farinaceous articles of food now in use among the delicate and convalescent.

From the specimen kindly furnished us by Mr. Clarke, the fundu grain appears to be quite as delicate as arrow root, while it possesses a more agreeable flavor than sago, potato starch, and other similar preparations."

For the New England Farmer.

"TROTting COURSES ON OUR FAIR GROUNDS."

I perceive, Mr. Editor, that you say there exists a diversity of opinion as to the expediency of this class of exhibitions, and invite discussion of the question. If this diversity of opinion actually exists, then it presents a fair subject for discussion. That there is a growing disposition to introduce these at all our agricultural shows, cannot be denied. There will always be a class of persons with an ambition to show their adroitness in the management of *fast horses*; and generally, their skill in other things is *universally* in proportion to their ability in this. A fast horse, like a powerful cathartic, may be of value in an emergency, but neither can be desirable on ordinary occasions.

A correspondent in the *Farmer* of February 2d speaks of the *feats* of ladies on horseback as worthy to be encouraged at our shows. Of this I have great doubt. Not that I would discourage ladies in learning to ride, but I think these occasions are not fit opportunities to display their skill in this particular. Ladies should be able to ride on horseback, when health or necessity demand it, but never for show. The exercise does not accord with that modest deportment, which is ever their greatest charm. I cannot, therefore, commend such a display on our show grounds. I hope it never will be encouraged. But it is said the speed of the noble animal, the horse, can never be perfected, unless it is tested, and therefore it is fit that opportunity be given to put them to the test. This may be well, when it can be done without the usual accompaniments; but when a speculating, gambling spirit is awakened by the operation, it is productive of more evil than good. Whoever saw a horserace, in presence of many lookers on, without witnessing a disposition to bet upon the result? Whoever knew any good to result from such betting, or hazardous movements? They are neither more or less than gambling—and gambling is always demoralizing.

Beyond question, there are numerous ways of operating at our shows, that are unexceptionable; and while this is so, there can be no occasion to introduce operations of a questionable character.

August, 1856.

THE SEASON IN NEW HAMPSHIRE.—*Concord, July 27, 1819.*—Corn has not presented a more promising appearance since the year 1783—Rye much better than that fruitful season—Wheat generally middling, and some fields very fine. Flax and Oats better than an average. Hay about a middling crop.

I commenced my haying on the morning of the

6th inst. and finished on the evening of the 15th. In that time, I got in 91 loads, with about 96 days' labor, including boys, and what is extraordinary in my husbandry, the whole was housed without a drop of rain. I expended 15 gallons of rum, the flesh of two calves, pork, fish and other provisions the quantity unknown. I had scarcely housed my hay, when a plentiful rain refreshed the earth.—C. STARK, in *Salem Gazette*.

For the New England Farmer.

IMPROVEMENT OF PASTURES.

BY FREDERICK HOLBROOK.

I am interested in the improvement of some sixty acres of pasture land, now in low condition, having been formerly impoverished with successive crops of rye, and in later years too closely fed by village cows. The land is covered with grasses of inferior quality, interspersed here and there with ferns, shrub-pines, and bushes of various sorts; it early feels the influence of summer droughts, so that the pasturage is scanty and poor after about the middle of July each year,—indeed, it is not of very good quality at any season. The land lies pretty well for plowing, being either level or moderately undulating, and free from large boulders or fast rocks, though cobbly in some places; its soil is rather thin, but naturally a tolerably good quality of yellow loam. It is an important object to improve the land, pasturage in this locality being quite scarce, and commanding a high price. Various modes of improvement have been considered; and the plan adopted is to plow up so much annually as leisure from other employments will permit, say ten to twelve acres, in August or the forepart of September, top-dressing with some concentrated fertilizer, and reseeding to grass, sowing winter rye at the same time, for pasturage, while the young grass is getting foothold. It is not the intention in any case to allow the rye to ripen for a grain crop, as the removal of such a crop would draw upon the land too heavily, and in a large measure defeat its improvement for pasture.

In August of last year, twelve acres of the old pasture were measured off, for treatment in the way above-mentioned. Before starting the plow, the piece was cleared of the shrub-pines and large bushes, by taking a chain-hitch around the tops and pulling them out of the ground, roots and all, with the oxen, and drawing them off the field, piling them in heaps for burning. A few furrows were then turned around the field, with a light plow, drawn by one yoke of oxen; but finding the plow and team were quite too light to contend successfully with the stones and roots of brakes and bushes still infesting the ground, a larger and wider turning plow was substituted and an additional yoke of oxen employed. The larger plow was set to run from six to seven inches deep, and with the

double team the work of breaking-up was easily and thoroughly done.

In plowing, particular care was taken to overturn the sod completely, and shut the furrow-slices down flat, side by side, so that the vegetation then standing should be entirely turned under and smothered, leaving a clean surface-soil for the reception of the grass-seed, in which the young plant might grow without obstruction. In attempting the improvement of an old pasture, it is quite important that the vegetation of poor quality which has taken possession of the deteriorating soil, should be handsomely turned beneath, to decompose and furnish nutriment to the new grasses. A superficial "cut and cover" mode of plowing, therefore, although it may seem to save a little time at the outset, is in the end just no economy at all; for wherever there is a balk in plowing, or the furrow-slices are not matched in at the edges, there the wild herbage will at once begin to spread its roots and spring up again, choking down the young and tender grasses of the new seeding, instead of yielding them sustenance by its own decay beneath, and growing all the better for having the land in a measure stirred up and mellowed.

After plowing the land, it was harrowed lengthwise the furrows; then top-dressed with the following fertilizers, sowing them by hand, broadcast, the same as one would sow grain: eight acres with ground bone, four hundred pounds to each acre; two acres with guano, three hundred pounds to the acre; and two acres with fresh unleached ashes, twenty bushels to the acre. The field was then stocked down with twelve quarts of herds-grass and one bushel of red-top seeds, together with five pecks of winter rye to each acre, and thoroughly harrowed across and lengthwise the furrows, and the surface pressed down smooth with a heavy roller,—the work being all finished before the first of September.

The weather during the autumn following being quite wet, the rye and grasses came up finely, covering the plowed land with a handsome green—the rye giving the cows considerable feed in October. The rye and young grasses survived the winter well, and started up green early in the spring, giving pasturage before vegetation had started much in the old sward of the adjoining land. The rye mostly disappeared, however, early in July, but the young grass took its place, standing well through the summer, and affording a fresh, tender bite for the cows, even in the driest time, when the old fields adjoining were so parched by droughts as to yield but little feed, and that not very good. Indeed, just as far off as the eye could discern the pasture lot, it would readily mark off the newly seeded portion, by its deep green color in contrast with the brown and sombre appearance of the surrounding land. The rye paid for itself well in

the pasturage it afforded; and hereafter, six pecks to the acre, instead of five, will be sown. It was the intention to have sowed about five pounds of red and three pounds of white clover seeds to the acre, on a late snow in April last, but through the pressure of other employments it was erroneously omitted.

It is generally admitted to be doing well to make two spires of grass grow where but one grew before; but these twelve acres give fair promise of a greater increase over former products than that; and the quality of the grass produced now is much superior to that yielded before the land was plowed and seeded, which superiority is likely to last for several years. The cows have congregated on the twelve acres every day the present season, keeping the grass clipped as close and smooth as a newly-shaven lawn.

Not knowing by experience what stimulant would be most valuable as a top-dressing for this land, but feeling quite certain that the young grass would need something of the kind to start it into life vigorously, and that the land might thus be profitably helped, it was thought advisable to try several concentrated fertilizers side by side, comparing one with another as to expense and results produced, and thus determining what top-dressing would on the whole be best for future use. It was an additional reason for trying several applications that the land was of very uniform quality, and treated in all respects alike, saving the variations in kinds of top-dressing used. It would be drawing a hasty conclusion to say thus early, which, all things considered, is the best of the three fertilizers tried. It may, however, be fair to say, that up to the present time, the ashes give the thickest "stand" of grass, and a trifle the deepest green color; the bone-dust ranks next, and the guano last—though all have done remarkably well. It would be theoretical rather than practical to venture an opinion now of the comparative future effects of each manure applied; but the land will, in the end, show for itself, and upon that showing I may say something at a future day. Judging from the remarkable immediate effect of unleached ashes in this instance, I should conclude that even ten bushels of good fresh ashes, applied to pasture land in the same way, would produce marked good results; and I should plow and reseed such land if I had ten bushels of ashes to spread to the acre—not failing to apply twenty or thirty bushels, however, if I had them.

Brattleboro', Aug. 18, 1856.

A NEW WORK.—Messrs. LITTLE, BROWN & Co., of this city, we learn, are about to publish a work descriptive of the external phenomena of Nature, entitled, "*Studies in the Field and Forest.*" By WILSON FLAGG. To us, the title itself is exceedingly

attractive, and it cannot fail to be so to all those who have read the delightful and instructive Essays of Mr. Flagg, in *Hovey's Magazine*, and in our own columns. He is a writer of rare excellence in the department which he has selected, and his work will be eagerly sought by all lovers of rural life.

For the New England Farmer.

STRAWBERRIES.

A SELECTION OF TWELVE OF THE MOST ESTIMABLE VARIETIES.

Princes Magnate, (P.) the largest variety yet produced in our country, rounded and some berries compressed, scarlet, rich flavor, productive and highly valuable. A very showy berry for market, and a very remarkable and distinct fruit. Plant extremely hardy and vigorous, with large broad dark-green foliage. The leaves never burn during summer, nor are the plants ever injured by the winter.

Prince's Climax, (P.) very large, conical, beautiful bright scarlet, a splendid fruit, good flavor, very productive, estimable; plant vigorous, with pale-green foliage.

Imperial Scarlet, (P.) second only in size to the two preceding, to which it is rather superior in flavor; the form obtuse conical or rounded, scarlet, handsome and very showy, juicy and sprightly flavor, firm and well suited for market, productive; plant very vigorous, foliage pale-green, very large and luxuriant; a remarkable variety, very valuable for the size and beauty of its fruit and for its other qualities. This and the preceding variety are of larger average size than Hovey's Seedling, and much superior in color and flavor, and consequently better suited for market.

Imperial Crimson, (P.) large, short cone or rounded, dark scarlet or crimson, fine color, sweet, fine flavor, productive, a first-rate berry, firm for market. It is nearly as large as McAvoy's Superior, and has the qualities for a market fruit in which that variety is so deficient.

Le Baron, (H.) early, very large, obtuse cone, dark scarlet, not showy, sweet, rich, melting, highest flavor of all the large varieties, very productive for one of its sexuality, and continues long in successive bearing; foliage tall, light green, and very vigorous, a seedling of the old Swainstone.

Suprema, (P.) very large, obtuse cone, bright light scarlet, a beautiful berry, juicy, sprightly, moderately sweet, very productive; foliage large and vigorous. A seedling from Montevideo or Chili, and precisely equivalent to obtaining a Pistillate variety from the British Queen.

Rosalind, (P.) very large, obovate, beautiful light scarlet, moderate but good flavor, very showy, scarcely firm enough for long carriage to market, very productive; plant vigorous, with large broad foliage.

Eclipse, (P.) early, large, conical, splendid fruit on long penduncles, and has the remarkable property of ripening all its berries at the same time, bright scarlet, high brilliant color, fine flavor with slight acidity. It is one of the greatest bearers of all strawberries, and a full and profuse crop may be earlier supplied for the market from this variety than from any other; plant vigorous, with large foliage. A very striking and remarkable variety.

Ladies' Pine, (P.,) medium size, perfectly round, beautiful light scarlet, very sweet, highest and most exquisite flavor, productive; foliage dark-green, as if varnished, vigorous growth, with large fruit stems. This most estimable fruit will be deemed indispensable by every amateur who once tastes it.

Magnificent, (P.,) very large, obtuse cone, light scarlet, good flavor, very productive, very valuable.

Diadem, (P.,) very large and showy, rounded, beautiful light scarlet, pleasant flavor, a remarkably fine and beautiful berry; plant very robust, vigorous, and hardy, with tall light green foliage, very productive; a seedling of the Iowa.

Huntsman's Favorite, (P.,) medium size, obtuse cone, bright scarlet, very handsome, sprightly, juicy, sweet, and very fine, productive, highly valuable. This variety was selected by Professor Huntsman from a bed of my seedlings, and was named as above.

Crimson Perfumed, (P.,) large, obovate or rounded, crimson, sweet, juicy, high perfumed flavor when fully ripe, very productive, valuable; foliage dark-green.

Melvina, (P.,) large, obovate, bright crimson, juicy, sprightly, good flavor, very productive. This variety greatly resembles Hovey's Seedling, its parent, both in the growth and foliage of the plant, and in the form of its fruit. But when contrasted it is rather smaller, with the advantage that the berries are of a more average size, and less unequal than that variety; the color is a brighter red, the berries more juicy, and of a more spirited and higher flavor, and it ripens fully a week or more before the Hovey, thus obviating the disadvantages of that variety. It is firm and well suited for market; foliage dark green and luxuriant when in full growth. A grower who sent a considerable quantity to market the past season, contracted for the whole at 31 cents per quart.

WM. R. PRINCE.

Flushing, N. Y.

FRUIT STEALING.

There is scarcely a cultivator of fine fruit in the country, who has not been annoyed by fruit-stealing, and the loss of some new and rare specimens of kinds which he has procured at great pains and expense, and watched over for years, is a much greater loss than if money had been stolen from his pocket-book. We have not seen any card on the subject more to the point than the following, which has just fallen into our hands, and which was printed and posted up, as we are informed, with decidedly beneficial results. Dr. Whippo, its author, has long held several distinguished offices of trust in Pennsylvania, and among the rest that of Chief Engineer on the canals of that State:—

"Men, women and boys—I want to say a word to you. I mean you who would come into my orchard, especially on Sunday, and carry off my fruit. Of what next will you rob me? There is nothing I would spare more reluctantly than my fruit—there is nothing that has cost me so much time, labor and money, and nothing I have in my possession I value so highly. Upon what principle do you rob me of it? I do not like to be robbed at all—on your account as well as my own; but, if you rob me, take something that I would more willingly spare—take my money or the grain out of my barn. But I would not advise you to do even that, because it is wrong, and will cost you more obtained in this

way than if you worked for it, and obtained it honestly: 'Honesty is the best policy,' and so you will find it, let me assure you.

"The law against stealing fruit is very severe, as any of you will find by inquiry: and I know of a number of individuals who might be punished in a way they little expect, if I would put the law in force. But I abstain for the present, and shall only resort to the law when every other means have failed. If any doubt my word with regard to the severity of the law let them inquire. My patience is worn threadbare with these depredations, and I must put a stop to them *somehow*.

—Country Gentleman. CHS. T. WHIPPO."

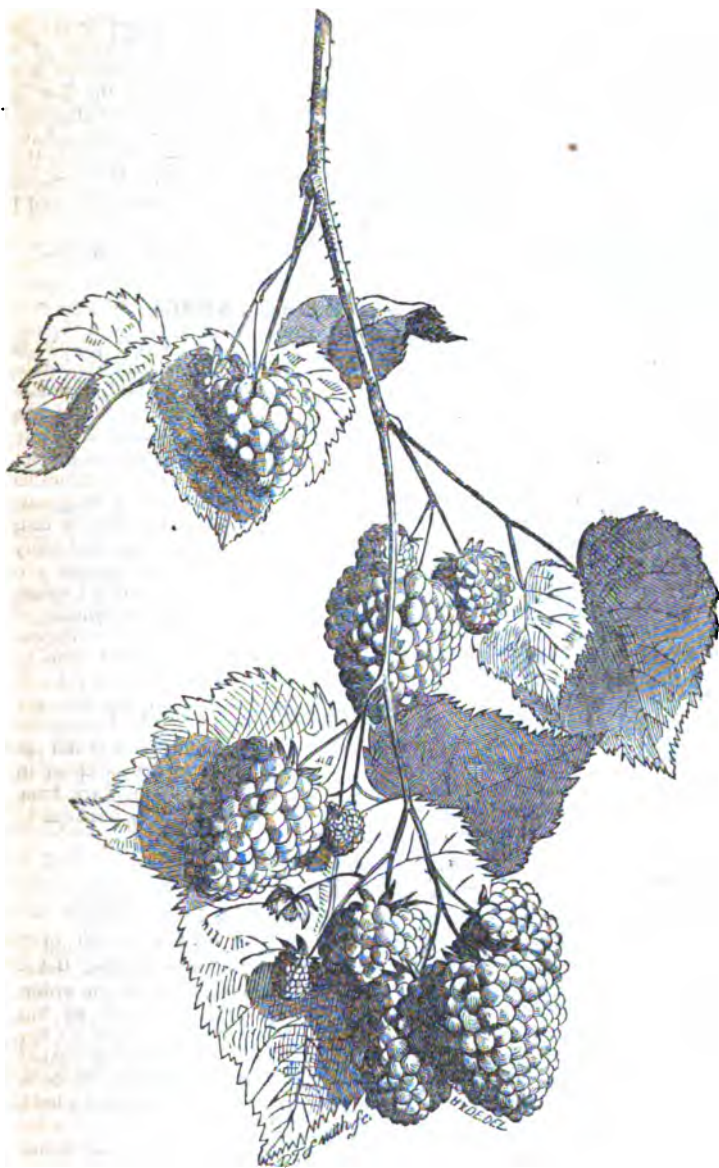
BRITISH ENERGY.

A proof of the energy of the British people, is the highly artificial construction of the whole fabric. The climate and geography, I said, were factitious, as if the hands of man had arranged the conditions. The same character pervades the whole kingdom. Bacon said, "Rome was a State not subject to paradoxes," but England subsists by antagonisms and contradictions. The foundations of its greatness are the rolling waves; and, from first to last, it is a museum of anomalies. This foggy and rainy country furnishes the world with astronomical observations. Its short rivers do not afford water-power, but the land shakes under the thunder of the mills. There is no gold mine of any importance, but there is more gold in England than in all other countries. It is too far north for the culture of the vine, but the wines of all countries are in its docks. The French Comte de Lauraguais said, "no fruit ripens in England but a baked apple;" but oranges and pineapples are as cheap in London as in the Mediterranean. The *Mark Lane Express*, or the Custom House returns, bear out to the letter the vaunt of Pope—

"Let India boast her palms, nor envy we
The weeping amber, nor the spicy tree,
While by our oaks those precious loads are borne,
And realms commanded which those trees adorn."

The native cattle are extinct, but the island is full of artificial breeds. The agriculturist, Bakewell, created sheep, and cows, and horses, to order, and breeds in which everything is omitted but what is economical. The cow is sacrificed to her bag, the ox to his sirloin. Stall-feeding makes sperm-mills of the cattle, and converts the stable to a chemical factory. The rivers, lakes and ponds, too much fished, or obstructed by factories, are artificially filled with the eggs of salmon, turbot and herring.

Chat Moss and the fens of Lincolnshire and Cambridgeshire are unhealthy, and too barren to pay rent. By cylindrical tiles, and gutta-percha tubes, five millions of acres of bad land have been drained and put on an equality with the best, for rape culture, and grass. The climate, too, which was already believed to have become milder and drier by the enormous consumption of coal, is so far reached by this new action, that fogs and storms are said to disappear. In due course, all England will be drained, and rise a second time out of the waters. The latest step was to call in the aid of steam to agriculture. Steam is almost an Englishman. I do not know but they will send him to Parliament next, to make laws.—*Emerson's English Traits.*

BRINCKLE'S ORANGE RASPBERRY.

This is a new variety of this excellent fruit, originated and propagated by the highly intelligent and indefatigable gentleman, Doct. BRINCKLE, whose name it bears.—Mr. GEO. DAVENPORT, 14 Commercial Street, who has it for sale, has fruited it this season, and exhibited it at the Horticultural Rooms in this city. He showed branches on the 23d of August, on which were berries in full perfection as to ripeness, with others in all stages down to undeveloped blossoms. He states that he picked the first ripe fruit from the same stalks July 12, that the plants stood the winter well, and have every appearance of hardiness.

The fruit is of good size and flavor, and as its name indicates, is of an orange color. It also promises to be a very prolific variety.

A gentleman on the Hudson river, a horticulturist, and a judge of these fruits, says :

"In flavor and beauty it has no competitors, and is not surpassed by any variety in any good quality. It equals Knevet's giant in hardiness and vigor, and continues as long in bearing as River's Monthly, Cushing and V. P. French, which is as long as the season

IMPORTED COWS.—Paran Stevens, Esq., the well-known proprietor of the Revere House, has just received by the ship Simoda, from Havre, three superior cows purchased by him at the late Paris Exhibition, where each of them took a prize. Two of them are of the Guernsey, and the other is of the Alderney breed. The two Guernsey cows have bull calves, and the other cow a heifer calf, all of which arrived safely. Mr. Stevens considered these the finest specimens of the breeds to which they belong, that he met with in Europe. They have been sent for the present to Nahant.

Thomas W. Olcott, Esq., has given \$10,000 to the Dudley Observatory.

continues warm enough to ripen the fruit. I have picked fine large berries on the 10th of October, with its leaves as green as at any time in the season, with the Antwerp and Fastaf by its side, brown and dry, killed by frost. This has been uniformly the case in different localities, during the five years that it has been in cultivation."

FODDER CORN.—The attention of the reader is called to an excellent article on this subject, in another column. It should have been published at an earlier date; but will be preserved for reference in the Monthly edition of the *Farmer*.

For the New England Farmer.

LITTLE THINGS BY THE WAY-SIDE.

MR. EDITOR:—When my hog is sick, I give him $\frac{1}{2}$ pint of fresh lard in a quart of new milk. Simmer until the lard is melted, then give it warm. Repeat this dose once in 6 hours until the hog shows signs of recovery.

TO PAINT AN OLD HOUSE

which requires much paint, I would take 2 quarts of linseed, (tie up in a cloth) and boil 3 or 4 hours in 4 gallons of water; then stir in whiting until it is as thick as whitewash in a proper condition to lay; put it on with a whitewash brush. In a few hours, it will be smooth and hard, and furnishes a cheap, but durable ground for a coat of paint.

SAW-DUST MANURE.

I would dissuade any person from using saw-dust in their stables as litter, or as an absorbent in any way. As an absorbent of liquid manures, its first office is to absorb a much larger bulk than its own, specifically speaking; second, to contribute nothing to the soil, to which it is applied, as its union with liquids prevents its decomposition, as an artificial heat is engendered by such union, which destroys the liquids; after which, the saw-dust remains intact. Meadow hay, straw, muck or loam, is much better, as any of the last named, when well saturated with liquids, immediately commences decomposition, by which the whole mass is easily made into manure. Our liquid manures are much more valuable than the hard excrements, from the fact that they contain the salts and minerals in a greater degree, so essential to a profitable improvement of our soil.

CHIP DUNG FOR MULCHING TREES

also stands condemned on my journal. By close observations, made this season, I find that the worm that bores dry pines, and other trees, is the identical "apple borer," and inhabits old logs, chip dung, and nearly every variety of decaying wood. Well decomposed muck is a clear exception to this class, and in my opinion, is the very best article to put about young trees, at transplanting, mixed with an equal amount of well pulverized barn yard manure. I am well persuaded, from experiments made this season, that one-half peck of clear sand, or bank sand, put around the body of the tree, at the top of the ground, has a strong tendency to keep the borer away. Not one of mine treated in this way has been injured this season. I attribute the ravages of the borer upon our apple and quince trees, for the past fifteen years, to an absence of the broad forests which once covered this section of country. Now the subject is before me, allow me to say a few words in relation to

TRANSPLANTING YOUNG FRUIT TREES.

As to the time of setting, my method is to do it when I have time to do it in the most thorough manner, spring or fall. In process, I dig a hole 6 feet in diameter, and $1\frac{1}{2}$ deep; putting the loam by itself, and placing the sods at the bottom of the hole, bottom up, to form a mellow, penetrable bed for the roots of the tree. I now take the tree from the nursery, and with a sharp knife trim off all the roots that have been cut or bruised by the shovel in taking up, with a slanting cut, slant-

ing from the bottom up, so that when the tree stands up, the angle cut upon the root, lies flat upon the ground. I now set the tree upright, in the centre of the hole, leaning a little to the west, and with a watering-pot, wet all the little roots, so that the dirt will readily adhere to them. Now I take some loam upon a shovel, finely pulverized, and shake it upon the roots while wet, filling all the interstices between the roots with light, fine earth, so as to leave the roots in their natural position at the nursery as much as possible. Put all the loam dug from the hole about the roots, then throw in the remaining earth, careful not to tread it down (as many do) as the light and permeable earth will admit dews, rains, heat and moisture, more readily than hard trodden earth, and will enable the tree to withstand the drouth, and frost much better. Set the bulby or bushy side of the tree to the south-west, to protect the body, in a measure, from the burning sun, and cold winter blasts which prevail in this section. When the trees are set, mulch each tree with a wheelbarrow load of compost, made of equal parts of compost and fine yard manure.

P. S.—Before setting, if the tree is large and thrifty, I usually head in the upright shoots in preference to cutting out some of the main branches. This checks its upright growth, and induces it to form a more symmetrical head than it would otherwise do.

LEWIS L. PIERCE.

East Jaffrey, N. H., 1856.

VERMONT STATE FAIR.

The *Sixth Annual Agricultural Fair* for the State of Vermont, took place at Burlington, on the 9th, 10th, 11th and 12th days of September. The grounds were directly on the shore of Lake Champlain, on a high table land, level, and affording fine opportunities for all the various departments of the exhibition. The edge of the bold bluff was skirted with yellow pines, checking the fresh breeze which came across the lake, and tempering the hot rays of the sun. Water was brought to the grounds in abundance, both for man and beast, hay and provender were plenty, and booths, crowded with all sorts of edibles, afforded aliment for the hungry and tired visitors who were in attendance to the number of thousands.

The weather was favorable, the roads in good condition, and, with the exception of a political meeting at Plattsburg on the second day, nothing to prevent a numerous attendance by the people of the State.

The show of *Horses* made the leading feature of the occasion, and well may Vermont bear off the palm in this department of rural industry. The attention of the country is now turned to Vermont for the best blood in this noble animal; and a single visit to the course at this fair, would satisfy the attentive observer that the reputation gained is not a fictitious, and will not be an ephemeral, one. Prices ran high. \$20,000 was offered for the well known horse, "Ethan Allen," and refused,

and \$9,600 was paid for a Black Hawk colt less than two years old, to be taken to Baltimore.

In the department of cattle, the exhibition did not reflect credit upon the productive ability of Vermont. The *working oxen* were neither numerous nor particularly excellent. A few bulls only, of any blood, were remarkable; and with the exception of a lot of cattle of mixed Durham blood, the property of Mr. Ezra Meach, Jr., of Shelburn Point, there was nothing of striking excellence in numbers. There were a few young milch cows of fine appearance, and some yearlings of large size and excellent points.

Among the *Fat Cattle*, there were some very fine. A pair by B. P. Munson, of Wallingford, and others by G. W. Brownell, of Williston, were a credit to the State.

The show of *Sheep* did not come up to what we have seen in Vermont before.

What butter and cheese we saw appeared to be of the highest excellence; but both were meagre in quantity.

Where the women were wholly concerned, in the department of domestic manufactures, and all in-door industry, there were many evidences of taste and skill.

There was little fruit of any kind, not as much as any single good garden might show.

Fine specimens of the Vermont marbles were presented, and had been wrought with a praiseworthy skill. There were also castings, in iron, of various utensils.

The department of *machine and agricultural implements*—but especially of large machinery, such as hay-presses, stump-pullers, and sowing-machines, was well represented. A seed sower presented by Mr. Hazen Willard, of Vergennes, attracted considerable attention. It was claimed to possess the ability to sow any seed, from the size of a kernel of corn down to mustard seed, and sow it and cover it regularly. The machine occupies a breadth of some eight feet, has two revolving cylinders, with adjusting slides so as to reduce the holes to any required size. The seed is covered by a round stick, coming near the ground and filled up with spikes or teeth, about 6 inches long. The cylinders, and this revolving harrow, are moved by gearing connected with the wheels and moved by their motion.

A new Corn Sheller, patent of J. P. Smith, did the work with great rapidity, and separated the cobs from the corn. It is manufactured by Jason Davenport, of Middlebury, Vt.

In some respects, the Sixth Annual Agricultural Show of Vermont was surpassingly attractive; but in many others we thought it greatly deficient. We have little fault, however, to find with the officers who conducted it—they rather command our admiration for their zeal and the self-sacrificing spirit they have manifested in this and former years.

The first error, in our opinion, is, that the State does nothing to promote the objects of the occasion. It has neither given the enterprise the advantages and dignity of an incorporated body, nor contributed to its means of attracting the public interest. There can be no doubt that an appropriation of ten or fifteen hundred dollars, annually, would soon replenish the State treasury to more than double that amount. Then we would suggest that there be provided on the grounds a rude building of sufficient capacity to accommodate officers, reporters, judges, and such other persons as would be glad to dine together each day. There ought also to be, on one of the days, an address from some person engaged in agricultural pursuits, and during its delivery, the course should be kept clear of horses, and efforts made to bring as many as possible within its influence. Then the show of horses—although it will be the leading feature—should not be allowed to overshadow all things else. Systematic effort should be made to draw to the Exhibition the finest cattle, sheep and swine of the State, and the cattle should be groomed and made to appear to the best advantage.

A bold policy will be the true one. The people must make an effort to show their best and in its best condition. Vermont is capable of making the finest show—all things considered—of any New England State,—but unless she bestirs herself in all the departments of the Exhibition, she will surely lose her laurels in everything but the single show of horses.

We would express our obligations to the officers of the society, and the Hon. HARRY BRADLEY, for their kind attentions, and to President WHEELER and his interesting family, for the hospitalities of their house during our stay at Burlington. Some other matters connected with our visit will be spoken of hereafter.

SWALLOWS AGAINST FLIES.

While on a late visit to a friend's residence in the country, we were most agreeably surprised at finding an unusual scarcity of flies, mosquitoes and the whole tribe of winged nuisances which have there in years past warred against peace and comfort of both bipeds and quadrupeds. The change was readily accounted for upon learning the following facts:—

Last May, about one hundred and fifty swallows one morning made their appearance and commenced building their nests under the eaves of a long new barn. As soon as their operations were discovered a cleat was nailed along the boards, which was painted, and thus better facilities afforded the swallows for attaching their nests. Thus encouraged, the whole feathered company at once set to nest building, and in three weeks' time, between seventy and eighty of these mud fabrics were completed; and in about one month more, each of these was occupied by from three to six tenants. Your readers can easily conceive of the

immense sacrifice of insect life required to feed such a numerous company. The result has been as before stated. Add to this, the joyous warblings from these feathered songsters, and what a contribution of pleasure and comfort!

To legislatures in general and the whole community in particular, we say, encourage bird raising. Don't suffer wanton sportsmen to enter your fields, and prey upon these friends of man and beast. Show your regard for your own and the welfare of the community by sparing the birds.—*Traveller.*

For the New England Farmer.

FODDER CORN.

I have observed frequent references in the *New England Farmer*, to an article which I thus denominate, but as all I have seen appear to have been from men who were inquiring, rather than of those who had made full experiments in the business of growing this kind of fodder, I have been induced to forward the following communication, which is the result of about fifteen years experience.

I began with common corn in drills three feet apart, and let it stand much too long, so that I had a large supply of hard stalks which were useless for fodder. After sundry trials, I at length came to the following results and adopted the following rules.

1. Any kind of land which is suitable for corn, is good for the crop in question. If it is rich, the growth will be so much more rapid and luxuriant, but you may get a good crop on land of moderate fertility.

2. My time of sowing or planting is at any period from early spring, to the middle of August. If at the latest period, your land should be in good condition, and you will have a growth sufficient for the best kind of fodder by the time of the earliest frosts. And if it gets some slight nippings it is not fatal, but the sooner it is then cut the better. I have, however, let patches stand till the middle of November, when the top leaves were faded and dry. But the body of the stalks were still good, and I had rather have them to feed out to milch cows than good hay as a part of their food.

3. *On planting in drills or sowing broadcast.* The drill system is the best for weedy land, on account of the advantage of hoeing, which requires but little labor if it is done in season. All undergrowth will soon be overtopped on my mode of cultivation. When I go for drills, eighteen inches apart is an ample width. I have gone down to twelve, but this is too narrow, unless your land is very rich. The abundance of roots will be too much cramped, to produce a sufficient growth of blades. In the drill system you have this advantage; with a sickle or hand scythe you can cut down the rows in a rapid manner, and prepare for curing and binding very easily. On this plan the corn is dropped like peas, the average distance should be about three inches.

When I sow the corn broadcast, four bushels to the acre is my general rule. If the kernels are large more seed should be used. Like small grain for fodder, I have found the more that will grow well, the better it is for feeding.

4. *The best kind of seed.* My rule is to look out for the best flat corn I can find, and avoid by all

means that which has been swelled on the voyage, as much of it will not come up. In former years I found the Maryland corn was better than that which came from farther south. The kernels, however, are generally large, so that fewer plants will be obtained from a bushel. For a few years past I have sought for the yellow western corn, that comes by the way of the lakes. The kernels are of moderate size, and pretty sure to vegetate if it comes direct.

5. *Sweet corn for fodder.* This I have often used, and find it very good, but still I cannot recommend it in preference to the gourd seed kind, as it is called. The yield is much less. It no doubt contains more saccharine matter, and is more delicious to the taste of cattle, and it is well enough to use it in a small way, but a full foliage is easiest obtained from southern or western seed. Cattle are fond enough of that, green or dry.

6. *The proper time to cut this fodder.* In my early experiments I was very apt to let it stand too long, so that I lost, in the hardening of the under growth, what I gained in the upper, so that I now cut it so early that most of the stalks will be eaten, especially by the aid of a cutter. But still if a portion of them are left for litter, you will get more substantial fodder from the same ground than from dry small grain, minus the leavings.

Corn in drills on good land may be cropped once or twice, according to the luxuriance of its growth before the final cutting. Where a man has but a cow or two, these croppings will aid very much the supply of food, and the yield of milk. The way this is done is to grasp a handful of the tops, and take them off with a stroke, but be careful not to go down too far. In a few weeks, where the plants are in vigorous growth the leaves will have attained their former height. Half a bushel of these leaves pressed down by hand, are a good mess for a cow instead of meal.

7. *How to manage the broadcast sowing.* I prepare the ground the same as for oats and millet. It should be levelled with a harrow, to secure uniformity in the disposition of the seed. But so different is this sowing from that of other grain, that a good sower will often find it difficult to spread it even as he travels on. This deficiency may be remedied by one who has no sowing skill following after, and supplying the thin places, as they can be easily seen. The covering may be done by a tooth harrow and a brush. But I think the better way is to use the tooth harrow twice in different directions, and finish with a roller. This prepares the ground for the scythe.

8. *On the curing of corn fodder.* This is the most difficult part of the whole operation. Millet is a hard thing to cure, but this kind of fodder is much harder, as the stalks are much larger, and full of juice. In my early experiments I carted it out on to grass land, principally to avoid the grit which would adhere to the leaves in case of rain. But this practice I long since abandoned, and let the crop remain where it grew. The grit will all fall off by handling, and I found the making will not go on so fast on grass, as the dry soil. A few good sunny days will prepare the fodder for being gathered into a smaller compass. That which comes from drills must be gathered into bundles for sheaves, and be opened and turned as long as it is needful. It is a good plan as soon as you choose, after cutting, to bind up the article into

bundles of any size, and carry it home to barns or sheds, or wherever it can be safe from rain, and then open it and stand it up around, or spread it on poles or any platform where the air can circulate underneath. No matter about the sun in this position; the moisture, the great trouble to be overcome, will gradually evaporate, and the whole may be packed away safely for any length of time. In this way the brightest and best fodder is obtained. The bundles left on the ground may be shocked up like top stalks, but special care should be taken in binding and capping the shocks, to guard against any water getting down into the bundles, for so solid are they when bound, that it will not run through, and the moisture about the bands will remain to the injury of the fodder. Were it not for the extra labor of dropping the seed in the drills, I should always follow this system, as more fodder can be got from the same ground and it is more conveniently handled through every process. In the making of this fodder which has been mowed the same process may be followed as with clover, only it takes longer time. After two days' sun it should be put in heaps of moderate size, to stand for a few days. At every opening and putting up the heaps may be made larger, till they are young stacks, and then they may be left at discretion as to time. But as the mass is very porous the heaps should be well covered with green cuttings or any thing else.

Thus far I have had respect to small operations in the fodder line, to the doings of those who have but little land or stock. To such I would recommend to employ every spare patch on their premises in growing the fodder in question, to be used green or dry; to plant the seed in every nook and corner, and particularly on head lands and in outside rows instead of potatoes, which in such situations generally do but little, but the roots of the corn here will extend outward and make vigorous plants. A good late crop of my favorite article may be obtained immediately after oats which are cut early for fodder, with a slight dressing with guano or ashes or some vigorous manure.

9. *Corn fodder compared with good hay for making milk.* I have often tried the experiment, with a result in favor of the former. But many say we will plant our land with our corn in our old way, and then we get the grain and fodder too. This is true, but the fodder is far inferior and but about one-tenth as much. And besides, a good growth of fodder may be had on land, where there would be but a meagre yield of common corn.

10. *Green corn stalks are injurious to milch cows.* This idea was referred to by a writer in the *Farmer* last year. Although this old tradition has been nullified by all my experience, yet to get the opinion of others I inquired of a milk man for his experience in his business. His answer was to this effect: "I grow a large amount of sweet corn on purpose for my cows, and begin to feed it out as soon as it will do to cut, and continue to, so long as it continues green, and I plant at different times. This practice I have continued for years, in face of the old notion of drying up the milk. To test this question," continued he, "let a cow break into a field of green corn, when of course she will eat all she wants, but who ever found she gave less milk for it? Instead of any injury from green corn fodder for my cows, I consider it among the best articles I can get for soil feeding, and for helping out my short pastures in dry times."

Farmers who have an ample supply of mowing lands have less inducement to go for this fodder, but even in that case, they will see their account in it in part at least, for their cows, green or dry. From no grain can so much per acre be obtained.

11. *Corn fodder for horses.* Through all the south and west, where grass does not grow naturally as with us, *corn blades*, as the leaves are called, constitute the principal fodder for horses, as well as other stock. These leaves are stripped off when green, and cured and done up much as top stalks are managed with us. In seasons when the grass crop will evidently be short, much may be done to help the deficiency by the sowing of corn, which may be done after it is certain the failure will take place. But where I can have my choice I get this fodder ready for cutting while the sun shines with full power, as the making of it is attended with more ease and less hazard. AGRICOLA.

UNITED STATES AGRICULTURAL SOCIETY.

OFFICE 160 CHESTNUT STREET, PHILADELPHIA.

The Fourth Annual Exhibition of the UNITED STATES AGRICULTURAL SOCIETY will be held at POWELTON, (Philadelphia,) on Tuesday, Wednesday, Thursday, Friday and Saturday, October 7th, 8th, 9th, 10th and 11th.

Premiums from TWENTY-FIVE to TWO HUNDRED DOLLARS, amounting in the aggregate to FOURTEEN THOUSAND DOLLARS, will be offered for the various classes of Domestic Animals, Fruits, American Wines, Vegetables, Grains, and Agricultural Implements and Machinery.

A Local Committee at Philadelphia, representing the various branches of Industry, has been appointed to co-operate with the officers of the society, in perfecting arrangements for the Exhibition. FIFTEEN THOUSAND DOLLARS have been guaranteed to meet expenses. This material aid, coupled with the excellence of the selected location, and the large amount of Premiums offered, induces the expectation that the Exhibition of 1856 will be superior to any of its predecessors.

A Grand Agricultural Banquet, in which ladies, as well as gentlemen, will participate, will take place on Friday, October 10th, when distinguished gentlemen will address the assemblage.

Favorable arrangements with the various railroads for the transportation of Stock and other articles are in progress, the terms of which will be given on application at the office.

The List of Entries, the Awards of Premiums, and the Proceedings, will be published in the Journal of the Society for 1856.

The Premium List, with the Regulations and Programme of the Exhibition, will be furnished on application to Mr. JOHN M'GOWAN, Assistant Secretary of the United States Agricultural Society, 160 Chestnut Street, (Rooms of the Philadelphia Agricultural Society,) or by addressing the Secretary, at Boston.

MARSHALL P. WILDER, *President.*

WILLIAM S. KING, *Secretary.*

Sept. 1st, 1856.

EFFECT OF HARD WATER UPON ANIMALS.—Horses have an instinctive love of soft water, and refuse hard water, if they can possibly get the form-

er. Hard water produces a rough and staring coat on horses, and renders them liable to gripes.—Pigeons also refuse hard water, if they can obtain access to soft. Cleghorn states that hard water in Minorca causes diseases in certain animals, especially sheep. So much are race-horses influenced by the quality of the water, that it is not unfrequent to carry a supply of soft water to the locality in which the race is to take place, lest there being only hard water, the horses should lose condition.

Mr. Youatt, in his book called "The Horse," remarking on the desirableness of soft water for the horse, says:—"Instinct or experience has made the horse himself conscious of this, for he will never drink hard water if he has access to soft he will leave the most transparent water of a well for a river, although the water may be turbid, and even for the muddiest pool." And again, in another place he says: "Hard water, drawn fresh from the well, will assuredly make the coat of a horse unaccustomed to it stare, and will not unfrequently gripe or further injure him."

For the New England Farmer.

THE SEASON AND CROPS.

MR. EDITOR:—On returning home, after several months' absence, by reason of ill-health, I find the complaint general among the cultivators of this neighborhood that their crops are much less perfect than was anticipated. The general reason assigned is, superabundance of moisture. Within the last two months there has fallen about as much rain as there usually falls in an entire year. The consequence is, many of the crops are literally drowned out; and what are not, fail to ripen in a sound condition. Potatoes, for instance, are entirely defective. Onions, not more than two-thirds of a crop, where a large yield was anticipated. Rye, less than half the usual quantity of matured grain. Corn, much stalks but imperfect ears. Apples, none to speak of. Grasses, much grown, but a large part spoilt in making. And so generally with all the products of this abundant season.—Heretofore, we have suffered from a want of moisture; the present season from a superabundance of it.

South Danvers, Sept. 12, 1866.

REMARKS.—We have travelled over a large extent of country since the middle of August, and find the crops, as stated by our correspondent, sadly affected by the rains.

For the New England Farmer.

WHY DON'T YOU SELL YOUR FARM?

MR. EDITOR:—This question was asked me by a neighbor, after reading your travels in New Hampshire, and glancing at the "Farms for Sale." I have a reason for not selling—without mentioning a thousand truly logical arguments which give more favor to farming than any other profession—which I will state. If people continue to be vulgar enough to eat, and the country becomes too vulgar for a decent young man to remain in it, I see no other alternative than this, that farms will be plenty and cheap for cash, and provision will be high for cash, and a general stagnation in business will turn the rich men of the cities to purchasing farms; and for the future to bend their intelligent

and enterprising minds and bodies to the now honorable occupation of farming. This is the ultimate alternative. I expect under these circumstances to be respected yet.

Freelown, Mass.

E. J. W.

EXTRACTS AND REPLIES.

THE YELLOW LOCUST.

I wish you would state where *yellow locust* seeds are to be had—the best time to plant them—how long the seeds are to be soaked, and how valuable the yellow locust tree is.

J. W.

Newport, N. H., 1866.

REMARKS.—Our correspondent is referred to the *Monthly Farmer* for 1854, for several articles on this subject. See pages 48, 265, 479 and 482. Mr. S. Cune, 'of Brattleboro', Vt., writes the *Country Gentleman*:

"I will tell you how I managed to get a grove of yellow Locust trees. About twenty years ago I sowed half a pound of locust seeds in beds, the same as I sow beets or carrots. I prepared my seed by pouring hot water on it and letting it stand a few hours. The next spring, I took up my seedling trees, and set them out on a piece of ground that was so poor that it would hardly turf over. I plowed some furrows twelve or fifteen feet apart, laid the roots of my seedling trees into them, about two feet apart, covered them with my hoe, righted them up with my hands, and let them go without further cultivation. At this time I have a beautiful grove of trees, straight and thrifty, and many of them long enough for fence posts. The effect on the land is wonderful. It produces ten times the feed it did before the trees were set out.—When I took possession of my farm, I found that acre had been skinned, until it was almost worthless. Now it produces double the feed of any acre of pasture I have. I take no little pride in showing my trees, and the luxuriant growth of white clover under them."

HUBBARD SQUASH.

MR. EDITOR:—I would respectfully refer Mr. Robert D. Weeks, or any other person desirous of obtaining seed of the Hubbard squash, to J. L. Gould, Esq., of Bridgeport, Ct. I would gladly supply that gentleman directly, but all our spare seed were reserved for Mr. Gould, and forwarded accordingly. Mr. G. has entered largely on their cultivation the present season, and should the season prove propitious, after November next, he will supply parties desiring it, with good seed, at a fair price. I have Mr. Gould's authority for making this statement. Yours respectfully,

J. J. H. GREGORY.

Marblehead, Mass., 1866.

HOW TO CURE FODDER CORN.

MR. EDITOR:—In the first place, get a stick that has two sticks inserted at right angles at the top. Insert it in the ground, after stooking the corn draw the stick out; then let it stand as you would field corn. Draw the corn round, and then draw it over. Stook a little this year, and try it.

Medfield, 1866.

WM. SALISBURY.

WASHING MACHINE—GARDENER'S TEXT-BOOK—
PEARS—PEACHES.

Do you know of any washing machine that saves enough labor to make it an object to procure one? Are they preferable to washing fluids? If so, why? Which is the best kind, and how do the floating ball machines work?

Is Schneck's Gardener's Text Book better adapted to this part of the country than Buist on the Kitchen Garden? Do Beurre Clarigeau pears hang well on the tree? Which is the best kind of early watermelon? Which the best very early and late peaches? A SUBSCRIBER.

Fitchburg, Sept., 1856.

REMARKS.—Mr. W. Wheeler, of Acton, Mass., is the manufacturer of a washing machine which is constantly in use in our family, and will not be dispensed with very soon—so say the women.

WOOL, POTATOES AND CHEESE.

A correspondent sends us a letter, with samples of wool, and requests us to see some of the manufacturers, and ascertain what they will pay for 2,000 pounds of it; also, what he can get for potatoes, peas and cheese, and who are the honest men to whom he can consign his goods! Dunder and blitzen! O, for the head of a Hydra, and the hands of a Briareus—if we only had them, how we'd make the wool fly! Wool and cheese, potatoes and peas. Now we are one of the cleverest and most accommodating persons in the world; we never could see a child in trouble, but would leave a good dinner to run and tend it; never heard a maiden sigh, but felt as though we must go and whisper consolation in her ear, and never saw a horse going to market with his master's potatoes and peas, but we had a mind to take a part of the creature's load on our own back. But what shall we do? A hundred letters a day, sometimes, and only one poor head to decipher them all. Some of them are in the Arabic, and some in the Sanscrit, we suppose, for we don't know what else they can be. Really, good friend, we wish we were a huckster or a commission merchant, for your sake; but as we are not, must refer you to the hosts of either that flock about North and South Market Streets in Boston. One thing is certain, the sample of wool is very fine, and "the manufacturer" may know where to find it by calling at this office. We have no doubt the cheese, potatoes and peas are, also.

LIME AND POTATOES.

I have several times noticed that where potatoes are planted on dressing which contains a portion of lime, or old plastering, they are much affected with the rot; whilst those in the same field where lime is not used, are perfectly sound. Having some potatoes accidentally left on a board which had been whitewashed, for a few days, on examination I found those on the board entirely worthless with the rot, while some in a dish near by, that had oth-

erwise been treated in the same way, were perfectly sound. Should this save for one of your numerous readers, a single mess of potatoes, my object will be accomplished.

A. A. WELLS.

Kennebunk, Sept., 1856.

ABOUT PRESERVING.

In preserving green corn, mine was put up in tin cans, boiling hot, and sealed while the cans were hot, and yet became sour. I wish you would give us such information as will reach the pockets of the poor. Give us the best receipt for making tomato ketchup, pickling cucumbers, and you will much oblige many of your subscribers.

A SUBSCRIBER.

CABBAGES STUMP FOOTED.

Will you, or some of your correspondents, inform me how to prevent cabbages from growing stump footed. Formerly it was a very easy matter to raise cabbages, but of late years, the roots become covered with knobs, which destroy the growth of the top, and prevent their heading. I have tried them on different soils, with different manures, but nothing seems to remedy the evil. I am satisfied the excrescences are not formed by a worm, nor by any particular manure. H. D. J.

Upton, August, 1856.

BOYS' DEPARTMENT.

"WHERE THERE'S A WILL, THERE'S
A WAY."

Henry Burgett was not quite twelve years of age when his father died; and fast as his tears fell when he knew that his kind papa would be with him no more, he wept, if possible, more violently, when his mother told him they must leave the pretty cottage, the only home they had ever known, and that hereafter he was to live with farmer Howard.

"We are poor, Henry," she said, "very poor, and young as you are, my boy, you must now earn your own support. But keep up a stout heart, you can do it. Fie on those tears!" and she turned hastily that he might not perceive the grief that was piercing her own soul.

Farmer Howard was a hard master, and a sorry time had poor Henry during the long summer days that succeeded this interview with his mother. It was work, with no relaxation, from the earliest dawn until the twilight had quite faded. Often did his courage fail, and despondency and indolence urge him to stop, but a stern necessity was on him, he must do or starve; and hence he kept at it, wearily enough to be sure, until the last apple was in the cellar, the last ear of corn in the crib, and all things secured against the winter, with the most painstaking thoroughness.

The winter, tardy as its approach appeared to Henry, came at last, with its three months privilege of school, and its glorious long evenings that he might spend as he chose, with no spectres of huge heaps of corn to husk, or vast fields of potatoes to dig, looming up in the distance.

How well those hours for study were improved, or how highly prized, the bright light which the blazing pine splinter shed from the attic window, until long past the hour of twelve, might tell. (A

pine splinter, because the mistress was a careful soul, and saved the candle-ends to light Henry to bed.) He advanced with surprising rapidity in his studies, and what wonder? Ardent, persevering effort was never unsuccessful. When the spring came he was quite master of the Latin grammar, and was beginning to read in this language with some degree of ease. The summer, with its wearisome round of duties, could not damp his desire for knowledge. Every spare moment was carefully seized and sedulously employed in his favorite study.

The winter came again, and with gleeful heart Henry bounded away to the village school. On the way a classmate overtook him; one who had often jeered him for his bashfulness, and plain, homespun attire, and who, with every advantage, had uninterruptedly pursued his studies.

"Ha, ha, how are you, Hal?" said he; "don't you wish you could read all that?" triumphantly holding up a Latin Reader, and spreading his palm complacently over the open page. Henry kept his own counsel, and together they proceeded toward the school-house.

Soon after the opening of the morning exercises, the class in Latin was called to the recitation bench.

"Henry," said the master, "I think you will not be able to go on with the class you were in last winter, you must fall back with the beginners."

"I should like to enter the Virgil class, Sir."

"Virgil class! Nonsense, boy, you could not read one word. Just let me see now," opening the book and placing it in his hand.

"How far shall I read?"

"As far as you can," replied the master, with a sharp twinkle of his gray eyes, and an involuntary sarcastic smile.

Henry commenced unhesitatingly to read, and had turned the first, second and third leaves before the master had sufficiently recovered from his surprise to arrest him.

"Stop, sir! Where did you learn all this?"

Henry told him where. Taking him by the arm, the master led him to the centre of the room, and placing his hand upon his head, said:

"Attention, boys; here is a hero; a greater conqueror than was Cæsar or Napoleon. Give him a round; three times three, now."

Cheerily, heartily, rang out that applause, penetrating the farthest recesses of that time-worn building, making the windows fairly shake again. What a proud day was that for Henry! How his heart leaped and almost bounded out of his bosom—how the boys shook hands and envied him—how the girls nodded and blinked their pretty eyes at him; he has not yet forgotten, and although at the present time the laurels of a country's regard are clustering thick about his brow, he often says, "That was the victory of my life. It was at farmer Howard's I learned to labor unflinchingly for a given end."

Children, this is no fancy sketch. Such a lad as I have described really existed, and from his example may we not learn to plant for ourselves elevated standards, and never give over until we have mastered every obstacle and reached our aim?

It is not always lessons to be learned, or wood-piles to be demolished or rebuilt. There are bad hearts to govern, vicious inclinations to restrain, selfish dispositions to be overcome; many, many

wrongs to be righted. There is room for a life long labor in our own hearts. Up then, my young friends, with a strong purpose of life. Shrink not at the sight of difficulty. Remember that "where there's a will, there's a way," and that perseverance is a sure guaranty of success.—*N. Y. Independent.*

LADIES' DEPARTMENT.

For the New England Farmer.

FRUIT PIES.

I have seen a statement going the rounds of the papers, and yours amongst the rest, I think—that fruit pies should never be made with an under crust. Now I want to tell you my plan, which I think far better, and much more convenient than to dish out with a spoon. I often make *both* crusts of the same, and consider them much more healthy to set before my family; yes, and company too, than a fashionable crust, though it does not *look* quite as nice. Take sour milk and cream, with a little salt, and saleratus enough to sweeten, mix quick, roll thin, and when ready to put the fruit on, set in the stove oven, till it has time to rise, and bake slightly—then proceed in the usual way. Cream of tartar may be used as a substitute for sour milk; and a little butter, or lard, for cream.

H. BARLOW.

BLACK LACE.—The brown hue, frequently perceptible in black lace, if occasioned merely by dust, may be removed by the following simple process: Steep the lace in porter which has stood long enough to become slightly stale. Dab it about in a basin until perfectly soaked; then press out the liquid by squeezing, carefully avoiding wringing, which would tear or fray the lace. After stretching it to its proper width, pin it out to dry. This will be found preferable to the use of gum-water for imparting to the lace the requisite degree of stiffening or dressing, and will make it appear as beautiful as when new.

TO CLEAN KID GLOVES OF ANY COLOR.—Take white soap and make a very thick "lather" with a soft brush, such as gentlemen use in shaving, and put the glove upon the hand; cover it with the "lather" and rub it off quickly with a clean flannel till it is dry. Repeat the process till the glove is clean, being careful that it is done so quickly as not to saturate the kid, and "it will look as nice as new."

PRESERVED FISH.—When the Russians desire to keep fish perfectly fresh, to be carried a long journey in a hot climate, they dip them into *hot beeswax*, which acts like an air-tight covering.—In this way they are taken to Malta, perfectly sweet even in summer.

HOLES IN PIES.—Persons who are in the habit of making pies during fruit season, should not make a hole in the top of their pies. By leaving the crust whole the juice is made to boil quicker, and thus the fruit is well done without the crust being burnt. The same result applies to meat pies.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. VIII.

BOSTON, NOVEMBER, 1856.

NO. 11.

JOEL NOURSE, PROPRIETOR
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

TRAITS OF NOVEMBER.

"For autumn comes in solemn gold,
And all the gaudy leaves are strown;
The leaves look barren, thin, and cold,
Beneath the darkening tempest's frown.
The hunter wanders by the wood,
By heath, and fell, and mountain brown,—
By hill, and dale, and river head,
Where the dead leaves find a bed,
Hectic, and grey, and fever-red."



NOVEMBER, in New England, is often a month of bright suns and soft air. It has the reputation of a blusterer, of being fitful, and gloomy, and uncertain. But for many years past this has not been the case; for the farmer has been able to pursue his out-door business with pleasure and profit. It is certainly a changeable month, and will sometimes justify the descrip-

tion of a fine writer whom we quote: "The fruit trees have now shed their leaves; the grass of the meadows is

withered; dark clouds gather in the sky; the rain falls in heavy showers; the roads are impaired, and walking abroad is almost impracticable. The man who has no resources in himself, murmurs at this change; but the philosopher contemplates it with satisfaction. The sere leaves and withered grass, moistened by the autumnal rains, form a rich manure to fertilize the land. This consideration, and the sweet expectation of spring, naturally ought to excite our gratitude for the tender cares of our Creator, and inspire us with a perfect confidence in him. Whilst the earth has lost its beauty and external charms, and is exposed to the mur-

murs of those it has nourished and delighted, it has commenced its labors anew, and is busily employed in secret working for the future good of the creation."

There is a chord in every bosom which, if properly tuned, beats in harmony with all the varying aspects of nature, with the surly blasts of autumn, as readily as with the soft sunshine and fragrant breath of summer. St. Pierre says, "beneficent nature converts all her phenomena into so many sources of pleasure to man; and if we attend to her procedure, it will be found that her most common appearances are the most agreeable. I enjoy pleasure, for example, when I see old mossy walls dripping, and hear the whistling of the wind, mingled with the battering of the rain. These melancholy sounds, in the night time, throw me into a profound repose. In bad weather, the sentiment of my human misery is tranquilized by seeing it rain, while I am under cover; by hearing the wind blow violently, while I am comfortably in bed. I, in this case, enjoy a negative felicity.—With this are afterwards blended some of those sentiments of the divinity, the perception of which communicates such exquisite pleasure to the soul. It looks as if nature were then conforming to my situation, like a sympathizing friend. She is, besides, at all times so interesting, under whatever aspects she exhibits herself, that when it rains, I think I see a beautiful woman in tears. She seems to me more beautiful, the more she wears the appearance of affliction."

The farmer has been too little in the habit of looking at life in these varied aspects. He forgets that he is what *his mind makes him*; that when once in comfortable circumstances—not affluent—the possession of a thousand, or tens of thousands more, *can add nothing to his real happiness*. All, after that, depends upon his own state of mind. If he reflects upon the natural phenomena about him, and occasionally reveals his thoughts to the family circle, there will soon spring up the most delightful companionship among them; all will advance

in scientific knowledge, books will be introduced and studied, and a sweet serenity and calm contentment of mind will pervade the whole household. This is true wealth; a wealth of which he cannot be robbed, so long as reason holds her sway. Corporations may refuse dividends, and banks their discounts, but they cannot reach that mine of wealth locked up in the recesses of his own thoughts.—They will not be obliged to roam for subjects of contemplation, for he finds them in his daily walks ever new, varying and instructive.

November commences the period which offers the farmer the opportunity for this particular department of farming. Will he not embrace and improve it? Will he not remember that *knowledge is power* to him, as well as to the mechanic or lawyer? Does he not confess that the skilful plowman, or he that best sows his grains and grass seed, or tends his nursery and orchard, stands the best chance to make the most money? The *money* advantage ought to settle the question with all—but when connected with the other, it leaves no room for indecision.

November, however, demands a variety of hand-work, as well as head-work.

FUEL AND TIMBER.—In district where snows lie deep, it is difficult to chop and collect wood or timber; this may be done to great advantage this month. Cord the wood, or if left aled length, place that and the timber in an easy position to be loaded.

CELLARS.—The house cellar walls should be thoroughly white-washed, and the whole cellar perfectly cleansed of all decaying wood or roots and so drained that water shall not stand in any part of it for a moment.

PUMPS.—These should be in order *now*, and protected from freezing.

CRACKS AND CRANNIES.—If you wish to save fuel, and always have your wife good-natured, stop all access for the wind about the underpinning of the house. It is difficult to keep warm rooms where the wind is allowed to sweep under any portion of the house. It works its way up between the ceilings, and makes double the fuel necessary to secure a comfortable degree of warmth.

FATTING HOGS.—*November* is a good time for the pigs to grow and the hogs to fatten. Give them a warm, dry place, and just as much clean, nutritious food as they will eat with a good appetite, and no more. If any is left in the trough, take it at once away, dash in cold water and sweep it out; at the next feeding be sure to give no more than will be greedily eaten. There ought to be this sentence printed in large letters and posted in every piggery in the land—"Leave no swill in the trough." The annual money-loss in Massachusetts by this error, would purchase a good farm.

SHEEP.—Give them plenty of sweet clover hay, and opportunity to go under cover when they

please—and they should have racks and be fed under cover in stormy weather.

QUINCE, PRAR, CHERRY, PLUM AND APPLE trees may be set this month, so may Currant, Gooseberry, and Raspberry plants.

CUTTINGS AND SEEDLINGS should be protected by a compost of muck and manure.

PRUNING.—Better do it now than in March or April, if you care anything for your trees.

YOUNG ORCHARDS.—Bank up around the stems of young trees with earth, and when the first snow comes tread it down around them. If mice are particularly numerous, place a tin, ten inches high round each tree. "It costs something." Certainly—but better do that than lose a nice tree and break up your rows.

NOVEMBER! Welcome, *November!* Are we all ready for you?

For the New England Farmer.

GREEN CORN FOR SOILING.

I have read with interest the number of the *N. E. Farmer* containing Mr. Blakely's article on green corn for soiling, and I well remember the article in the October number referred to by him. I was sorry, then, that the writer did not give his manner of feeding, for very much depends on that, more than many farmers seem to think. But Mr. Blakely has told us how he feeds green corn, and I have observed that those farmers who have not found, on trial, green corn and other green food to be beneficial, have generally used it as he has done. He says: "Three years ago, I fed seven cows quite liberally, for a month or more, on green stalks. My custom was to feed in the morning, as it was the only convenient time of doing it, and to scatter the stalks over a portion of an adjoining pasture on which they had not of late been fed, so as to give them as clean a place as possible, taking care to give them much more than they would immediately consume, which they would generally finish off in the course of the day." Now I beg leave to say to Mr. B., and to all others who pursue his course, that that is *not* the way, and that that makes all the difference.

Then he says, "I could not perceive that the stalks made much if any difference in the quantity of milk produced; but the cows continued to give less and less, about as the grass failed them, although they continued to consume a proportionably larger amount of stalks." He does not say whether his cows, finally, to cap the climax, jumped the fence between his corn-field and the "adjoining pasture," and ate to excess of the corn which they had so long been impatiently waiting and reaching for; but if they did not, he may consider himself a fortunate man, that his experiment terminated no worse.

And now, by the way, is there any kind of food that cows ever eat that has not been by somebody condemned as useless, or injurious? Some of our so called best farmers have their doubts in regard to carrots as a food to make milk and butter from, (except they be grated and churned with the cream) and very few would dare to feed milch cows on apples, sweet or sour; and some even think Indian meal will dry up the milk; and still others

withhold turnips, both tops and bottoms, because they have heard that somebody had a whole churning spoiled so, once; don't doubt but what they did, but the cause was not in the food, but in the way of giving it; and I say again, that makes all the difference. Now we are not afraid to feed any or all of these different kinds of food to milch cows, our trouble being to get enough of them. Having a cold, sour pasture, that won't keep any cow well, I am obliged to raise corn or some kind of feed not found in the pasture, for my cattle, both cows and oxen.

I might keep poorly, three or four cows through the summer, by letting them have the after feed in the fall on all my mowing lots, but by raising from a half to three-fourths of an acre of corn fodder, I am able to keep six or seven well, and that without feeding down my mowing fields, so as to spoil them for succeeding years. In the spring, and before the corn fodder can be grown, I feed with good English hay at night and morning, allowing the cows to get their dinner in the pasture. In the morning, all that give milk have an extra feed of shorts, or some kind of meal, wet up thin in water, and always given when in the stall. When the corn is grown enough, I cut and haul it to the barn in a cart, enough at a time to last two or three days; then give at two or three feedings as much as they will eat up clean, butts and all; which is a good deal, especially during the driest part of the summer. And this I do every night and morning, from July till into October, or till the frosts spoil the corn; and always in the barn, so that they expect it nowhere else, and when they are turned out into the pasture, they have nothing to hinder them from feeding on such as they may find in the pasture. They are seldom seen lingering around the cornfield, or knocking stones off from the walls by endeavors to get where they ought not to be; nor do they ever learn to jump or throw fence, as cattle always are inclined to do, when fed with stalks, pumpkins, &c., from the cornfield.

And now, you have been showing *another* way; is it not the *way* that makes all the difference? It gives us the means to keep nearly twice as much stock through the year as we could without the green corn, for while we are feeding the corn in the barn, we are making, or saving a great amount of manure, that we could not, if we fed it in the pasture. And then, by keeping our cows *out* of the after-feed, we get much more hay the next year with which to winter our extra number of cows above what might be kept in the pasture alone during the summer. Then, during the dry weather, and usual short feed of August and September, our cows are less affected than those that have no green corn. Speaking of manure, I should have said that by stabling the cows every night (which we should hardly have thought of, had it not been for feeding purposes) we can make fully as much manure as at any part of the year.

The corn should be planted at intervals, so that it will not ripen all at once, but continue along through the whole season. The large kinds of sweet corn are best. There are several ways of planting and tending it. I have, of late, spread all the manure, planted in rows, eighteen inches apart, and in the row, four or five inches with a seed-sower or corn-planter. Then draw a cultivator tooth between the rows by hand, a few times, before the corn gets high enough to shade the ground. After that, it takes care of itself.

If Mr. B. wishes to prove that Indian corn is not good food for hogs, let him feed them as he did his cows, throw enough good ears over to them in the morning to last them all day. Has he never seen farmers do that? And have they not, generally, had small, uneasy and squealing hogs? But let us feed corn, or any other good feed, to hogs at their trough, and in proper quantities, and at proper times, and they fatten kindly and contented. So I believe we may all feed cows with any kind of food which they love, having due regard for quantity, times and places, with equally favorable results.

A. W. C.

FARMERS' FESTIVAL AT GROTON.

The enterprising people of Groton have held an agricultural fair for two or three years past. On Friday, Sept. 26, it took place for the present year, and resulted, we believe, in giving great gratification to themselves, and a large collection of people who had come in from other towns. The day was pleasant. Recent rains had sufficiently moistened the earth to prevent any inconvenience from dust; the sun was bright, and the air elastic, and they imparted their cheering influences to the multitudes that thronged the highways and halls.

There was a plowing match, a trial of working oxen, a show of cattle, horses, sheep, swine and poultry; in the hall were many samples of butter, some of it remarkably fine, domestic manufactures, a handsome collection of herbs neatly put up in boxes, sieves, brooms, &c., presented by the Shakers at Harvard, and the usual fruits of the season. The Address was given by the Agricultural Editor of the *Farmer*, and was patiently listened to by a large auditory. The tent was pitched on a common near the centre of the village, and most appropriately nestled alongside of a school-house! Throughout the occasion, the idea was prominent that *the mind is the man*. Seven hundred and fifty sat down to the tables, one-third of whom were females. After some interesting manipulations for the space of fifteen or twenty minutes, the President, JOSIAH BIGELOW, Esq., called the company "from refreshment to labor," and the toast-master read the regular toasts, several of which hit so decidedly hard upon individuals present, that they felt it necessary to reply. These replies were short, nervous and witty, and often "brought down the house" at a dreadful rate. The Grotonians were wide awake that day. Everything was well arranged, and well up to time. We thought the exhibition, in all its departments, was highly creditable, though their Ex-Governor said at the dinner-table that it was nothing like as well as the people might do, *if they would*.

The Farmers' Club at Groton holds meetings in the winter, and these, with their annual exhibitions, will soon work a wonderful change in the condition of agriculture about them. We wish them great success.

For the New England Farmer.

NUTS FOR "A FARMER'S SON" TO CRACK.

MR. EDITOR:—Strange as it may appear—and "truth is stranger than fiction"—there are hundreds that look with contempt upon the noble avocation of farming, as well as upon farmers; little thinking, no doubt, that the vast numbers of a world's population are dependent upon the vigorous exertions of the "sons of the soil" for all the substantial of life. Should we not be proud in being one of those, without the exertions of whom the world, in its civilized state, could not exist a single month after the present supply should be exhausted?

Others look upon farming as a life of drudgery, yielding no mental delights and intellectual privileges, nor holding out inducements for its votaries to strive for posts of honor and trust. Were it otherwise, many would be glad to follow farming through life's long journey; among which, is one "Farmer's Son," who made known his objections in your paper of August 9, and for his encouragement, and others like him, to engage in the avocation of their choice, with your permission, I would present a few facts and suggestions. First, the *chances of success when commencing without capital*. According to my observation of facts, the proportion of those who succeed, commencing with or without capital, is very much in favor of the latter, as the former are very apt to imagine that their patrimony is sufficient to warrant them in hiring their work done, and they themselves live on the income, until finally they find themselves involved in debts, so deeply, that they sell out, and live and die, shiftless, worthless creatures. Exceptions to this rule, to be sure, are not hard to find. On the other hand, as I sit at this moment, my eye rests on the broad acres of *six brothers*, whose only patrimony at 21 years of age, was a fair amount of clothes, for those days, and a sickle each; all of whom are above board—save one, perhaps, who has been so unfortunate as to be kept back by a great amount of sickness—three of whom are money lenders, aside from holding railroad stock, and I think but one of the three over forty years of age, owning from one extensive, or two farms each; well stocked with animals and implements. One of these now holds the important office of Selectman of the town.

Other young and middle aged farmers have been sent as Representatives to our State Legislature. Does the "Farmer's Son," wish other men of more notorious fame, that are *practical* farmers? Let the names of Professor Mapes, Dr. Lee, of the "Genesee Farmer," and others, answer his purpose. It is a lamentable fact, that farmers generally, do not read enough, nor are they stored with scholastic lore; were it otherwise, it would be better for the country, for then, the farmer would have something "worth living for," and as "knowledge is power," it would afford and suggest facilities for acquiring that which is worth working for, viz., wealth. Inferring from what the "Farmer's Son" has written, he has a liberal education; let him be one to enter the field as an educated farmer, and thus assist to elevate the avocation to that dignity which it ought to command, and thus force the world, from peasant to king, to acknowledge that to be a *farmer* is to be a *man*, and not merely to be a *thing*, a kind of self-acting, rotary, motive machine.

For myself, sir, I am trying to be a farmer, and feel proud of the name, and love my avocation, and for the further encouragement of a "Farmer's Son," I will give a synopsis of the trials to which I have been heir. I am English by birth. At the age of fifteen years, was brought to this country by my father, accompanied by my mother, who was then sick, (1836,) and has been ever since, and five sisters. I could read quite well, and write a fair hand; that was all the education I had. In less than one year, my father died, leaving the family entirely destitute, after his sickness and death. I was then the only son; six months, however, added another son to the family. I was the oldest but one in the family. By my exertions, and the assistance of the few friends that we had made in this strange country, I supported my mother and the little one, by working out on a farm, and by other work that would afford a pittance, until I was nearly twenty-one years of age, when, by the assistance of friends, I was enabled to go and learn the shoemaker's trade, by which I supported my own family. Meantime, I had attended a common school six months; and since I was married, when twenty-eight years of age, I went to an academy five weeks; being all the education I ever got in that way. Working at my trade destroyed my health, and at this time, a phrenologist came along, and gave a course of lectures, which so engaged my attention, that I determined to study and practice the same, and by dint of perseverance, working days, and robbing myself of sleep, and studying nights, in a year and a half I commenced the profession publicly, with what success, the public must judge. I was then \$300 in debt, with nothing to pay with; however, I determined to pay, and get me a farm. By January, 1852, I had paid my debts, and had \$48 left in money, one cow, and a small library, worth, perhaps, \$100. I purchased my farm for \$800, paying \$40 down out of the \$48, promising the remainder of \$100 in the spring, and a yearly payment of \$100 and interest, till all should be paid. Thus far, I have succeeded in paying as fast as due, and supporting quite a large family. I have a nice little stock, and have made some improvements on my farm, and intend to make more. I am thirty-five years age, and by the time I am of the serious age of forty, I hope to have a comfortable and happy home, free from the liability of sheriff's hands. I have something "worth living for," as I have increased my library somewhat, and find time to read some seven papers each week, besides some from books. Besides all that, I expect to make, on my farm, from time to time, considerable sums.

PROGRESS.

Glover, Vt., Aug., 1856.

USE OF CATS' WHISKERS.

Every one has observed the whiskers of a cat; but few, perhaps, dream that they serve any valuable end. The following passage will prove the contrary:

"Every one must have observed what are usually called the whiskers on a cat's upper lip. The use of these in a state of nature is very important. They are organs of touch. They are attached to a bed of close glands under the skin, and each of these long hairs is connected with the nerves of the lip. The slightest contact of these whiskers with any surrounding object, is thus felt most distinctly

by the animal, although the hairs of themselves are insensible. They stand out on each side of the lion as well as the common cat; so that, from point to point, they are equal to the width of the animal's body. If we imagine, therefore, a lion stealing through a covert of wood, in an imperfect light we shall see at once the use of these long hairs. They indicate to him, through the nicest feeling, any obstacle which may present itself to the passage of the body; they prevent the rustle of boughs and leaves which would give warning to his prey, if he were to attempt to pass through too close a bush; and thus, in conjunction with the soft cushions of his feet, and the fur upon which he treads (the retractile claws never coming in contact with the ground,) they enable him to move towards his victim with a stillness even greater than that of the snake, that creeps along the grass, and is not perceived until it is coiled around its prey."

For the New England Farmer.

AN EXPERIMENT WITH VEGETABLE MUCK.

MR. EDITOR:—I have previously given to your readers some account of my farming experiments in the use of vegetable muck. Last autumn I ventured, from what I had noticed of the action of muck, to bank my house with it. Muck is eminently a non-conductor of heat, and of course we should be led to expect that it would be quite as useful for banking houses as spent tan, or sawdust, or spruce boughs, all of which are extensively used in this region. The objection against the use of muck, after the thing was thought of, for embanking, was the fear of soiling the paint. I tried the muck, thinking that, at least, I could wash off any dirt or stain that might be left. It proved the best protection against frost of any of the above named materials.

Within a few days I have removed the embankment, and no stain or soiling of the paint on the house appears, but the whole fell off readily and cleanly. In removing the muck, I spread it over my grass land, and about my trees; where it will do good as a top-dressing to the grass, and as mulching to the trees. The whole labor of removing the muck was but two or three hours, and everything is left in a neat and improved condition.

The expense of procuring and placing the muck, in the autumn, was less than to have procured any of the other materials; the expense of removal much less, and the benefit to the lawn and trees will fully repay the whole cost, and thus a saving is made and trouble avoided. Hereafter I shall use muck alone for embanking. Is not this little experiment sufficiently suggestive to appear in your excellent periodical?

MICHAEL.

Bangor, May, 1856.

SCIENTIFIC AMERICAN.—This popular journal of art and science entered upon its twelfth volume, last week. It is conducted with much ability, and is one of the most welcome and valuable of our exchanges, as the frequent drafts we make upon it, in filling our own columns, will bear witness. No inventor can afford to be without it, and it is of hardly less value to the mechanic, the artisan, the manufacturer, and the student in science.

CARE OF THE FEET.

One evening in Boston, just as Washington Alston, the painter, was approaching the door of a dwelling where a splendid party had assembled, he suddenly stopped short, and said to his friend:

"I cannot go in."

"Nonsense! why not?"

"I have a hole in one of my stockings."

"Pshaw, man, nobody knows it."

"But I do," said the celebrated artist, as he turned on his heel, and left his friend in doubt, whether to swear or laugh outright.

A long time ago, "when you and I were boys," reader, when dead people were brought in and thrown down upon the floor of the dissecting-room, just as indifferently as a brawny butcher throws down a great big pig to dissect into sausage meat, ham and spare-rib, and just as nude, except the face, which alone tells, in the recent subject, that the man is dead, we used, as a pastime, while the lecturer was calling over long Latin and Greek names, as dry as a fence rail, and as hard, to be cogitating in our own minds what was the position of that body when in life, what its relative standing in society. Somehow or other, we fell on the feet as the most reliable indicator, especially if the appearance of the body as to plumpness indicated sudden death. Now and then, the well trimmed toe-nail, its freedom from collections under it, and in every other spot, from toe-nail to ankle, scrupulously clean; these showed full well that the poor body so ruthlessly treated now, was tenanted, but a few hours before, by a spirit of purity, refinement and elevation, or had friends around it in the last sad hours of life, who merited such a character; and it was impossible to withhold our sympathy and respect for that lump of lifeless clay. At other times, the feet would be found in so filthy a condition, as to excite within us sentiments of the most irrestrainable disgust and contempt, and we felt as if the spirit which had so recently left that tenement was as foul and low as bestiality could make it.

On a beautiful November afternoon, away back yonder in the Forties, we had just stepped ashore on the Levee at New Orleans, after a ten-days' journey from Louisville, and hurrying along down the water's edge, a few yards from the shore, in the direction of the post-office, thinking of how many letters we would find there from absent friends, and kindred, and patients, we were aroused from our reverie by a tremendous concussion and noise.—The first glance was upward at the sky, filled with innumerable objects of every size and description; they had scarcely got high enough to take their turn downwards, and the first thought, that miracle of instinct, was, could we, by any rate of locomotion, put ourselves beyond the point at which the falling articles would strike the earth? We looked again, and thought we could. If any individual ever "*heeled it*" in double quick time, it was the writer of this article—every hair on the head and body seemed to stand on end, a chill thrilled through the whole frame at every successive step; we felt an expectation of an instantaneous crush to the earth! O, how long that race for life seemed, for we were not forty yards from the Louisiana, at the moment of explosion. Not a single thing touched us, although we heard many pattering around us, apparently as thick as hailstones. In an

instant, we stood still, why we cannot say, it was instinctive, not rational, and as soon as the sound of falling ceased, we turned to the scene of disaster. Just as we turned, a poor young fellow passed us, scarcely able to limp along, and the next instant, was a full grown man, flat on his back, without one atom of injury except he had no head; the backbone just protruded a little above the line of the shoulder. In that instant of time, some eighty-one persons, if we remember well, were hurried into eternity. Some lingered a moment and died; others lay a long time, and no aid came to them.—The whole surface of the levee was covered with bits of human bones, and joints, and flesh, and hair, and parts of clothing; a piece of boiler weighing perhaps a thousand pounds, struck a bale of cotton, cutting a mule in two, and shivered a cast-iron awning-post, some four hundred feet from the ill-fated steamer. As litter after litter passed by us towards the hospital and town, bearing its blackened, mutilated, dying occupants, a resolution suddenly formed itself in our mind, as apparently foreign to scenes like these, as it was possible to be—that as long as we lived, we never would, if alone, put our foot on a steamer or rail-car, except in our best clothing, and the whole body in as unexceptionable condition as razor, and soap, and water could make it. Now, why? The argument ran itself out in our mind as follows:—"If in that terrible hour, I had been bereft of all sense, the attention shown me, and the place assigned me in a private house or public hotel, or large hospital, would have depended, to a considerable extent, on the character of personal belongings." This is a thought which will bear maturing by all travellers.

Therefore, reader, if you would secure more marked attention from your physicians or nurses in times of sudden calamities and terrible mutilations of body, a clean person, a clean foot, would not be a despised passport.

The feet should be soaked in warm water, for at least twenty minutes, twice a week, and at the same time, rubbed and scrubbed with a brush and soap. Besides this, if they were dipped in cold water of mornings, ankle deep, both in at once, for a single minute, winter and summer, having them vigorously and briskly rubbed all the time they are in, then wiped dry and a walk taken, or held to a fire until perfectly warmed, the skin of the feet would be kept in a soft, cleanly, pliable condition, the circulation about them would be vigorous, and the result would be, in many instances, that corns and callosities would almost cease to trouble you; coldness of feet would, to a considerable extent, be removed, and 'taking cold' would not occur once, where it now occurs a dozen times; for it is through the feet, that many of our most serious ailments come. In addition, let us suggest, that one of the most useful of habits, as well as agreeable, during all the seasons of the year, in which fires are kept burning, let the last operation preceding getting into bed be, holding the naked foot to the fire, for ten or fifteen minutes, rubbing with the hands all the time, until most thoroughly dry and warm. A good antidote that.—*Hall's Journal of Health.*

NATIVE GRAPE WINE.—Messrs. E. Paige & Co., 41 and 42 North Market Street, sent us the other day a sample of their wine made from the grapes which grow on the hills and along the streams of

our own State. If we had the disposition, we could scarcely afford to use much wine, and do not pretend that we should "die in aromatic pain," if we found the flavor of a glass we were tasting a millionth part of a shade different from what we expected. But this native product was excellent—better than any of Longworth's sparkling Catawba we have ever tasted. Several persons tasting it pronounced it very fine. In sickness, and cases of weakness and debility, we should think it would be a capital wine. We are assured that there is not a particle of brandy or alcohol added to this grape juice, and that the sugar of which it is made is refined of most of its alcoholic properties.

For the New England Farmer.

RECLAIMING BOG-MEADOW.

BY F. HOLBROOK.

The Vermont Asylum for the Insane, located in this town, has a farm connected with it, affording a variety of luxuries and substantial farm-products for the use of the establishment. The consumption of the products of the soil by the Institution, is of course, in many articles, very much greater than the farm can ever supply; and to increase its productiveness in all reasonable ways, is a desirable object. The writer of this article, having some official connection with the asylum, occasionally counsels with its active officers as to the improvements of the farm, and feels quite an interest in their progress and results. Among the leading farm operations, is that of furnishing the establishment with fresh milk. To do this fully, a large stock of cows must be kept, and the farm must be made to support them, as well as the working teams of oxen and horses, summer and winter. The pastures and mowing lands must therefore be looked after. The method commenced for renovating the older portions of the pasture lands, was detailed by the writer in a recent communication to the *Farmer*. The mowing lands are mostly Connecticut river intervale, of excellent natural quality. About thirty acres of the intervale, however, lie low, and were, until recently reclaimed, wet and boggy, yielding little or nothing but coarse swale grass, fit only to be used for bedding the stock. This tract of bog-meadow is now all drained, and yields a great burden of excellent hay. It is the purpose of this article to describe the method of draining and reclaiming this land.

The meadow is not what would be called a peaty soil, but a stiff, heavy loam, or alluvial deposit, approaching in texture to clay, and of uniform, and very rich quality to the depth of two to three feet. It is annually flooded by the waters of the Connecticut, setting back in times of freshet. Some years several freshets occur to flow the land, and in others it is only covered by a January or a spring flood.

The water always deposits more or less sediment upon the land, and is often very muddy, leaving quite a top-dressing. The meadow was also made wet by a little brook from the highlands, and by several cold springs, which boiled up in various places, from a considerable depth below the surface.

Thus encumbered by water, the land was cold and sour, and contributed but little of value towards keeping the stock. But being evidently of the richest quality, and a greater quantity of hay than the farm was producing being quite desirable, it was resolved that the meadow should be drained and brought into English mowing, if on investigation a sufficient fall could be obtained to carry off the water. Some doubts were entertained as to what disposition could be made of the numerous cold springs, because, bubbling up from a considerable depth, independently of any connection with the higher lands adjacent, and in places more or less remote from each other, they could not be cut off by marginal ditches. We started various theories, but finally concluded they might be willing to discharge themselves at the bottom of the ditches that were to be made, on the principle that water seeks the lowest level. The sequel proved our supposition well-founded.

The first thing in attempting to drain the land, was to make an accurate survey with leveling instruments, to find where the ditches could be located so as to have fall enough towards the river to give them good draught. After careful investigation, satisfactory locations were found for two main open ditches, starting from a common point at the upper end, and sweeping along through the lowest and wettest portions of the meadow, by different routes, separating widely from each other in some places, but uniting in one ditch at the lower end, and from thence to the river, with fall enough to give a good motion to the water. In getting a suitable fall, however, one of the ditches had to be cut some seven or eight feet deep, for a few rods, through a swell of land near the lower end of its route. It is of course very important in attempting the drainage of land, to obtain a good draught to the ditches. In pretty level lowland, particularly, the best locations to secure this result, can only be accurately ascertained by the use of leveling instruments,—the eye, alone, being a very uncertain guide, and when followed, often leading one to commit sad blunders, and to find too late that the ditches are not dug in the right places to draw well, and must therefore be removed to another location, or the inconvenience and loss arising from the imperfect drainage of the land must be a very present trouble for all time.

The ditches were made about two feet wide at the bottom, and the sides were sloped up at an inclination of 45° ,—this slant making the drains from eight to ten or twelve feet wide at the top,

according to the depth of cut. In sloping the sides, the workmen were guided by little frames made of scantling pieces, two feet wide at bottom, and the sides flaring at angles of 45° , the frames being set along occasionally in the ditches to regulate the shaping up. Hundreds of loads of excellent stuff for the uplands were obtained in digging out the ditches. It was carted off into piles on the higher ground, to be used in the yards and sheds, and otherwise mixed with manure, for compost. The work of draining the thirty acres was commenced in July, 1851, and was all finished and the earth from the ditches all carted off that season, leaving the land free for future operations.

The brook from the highlands, which formerly found its own way over the surface of the meadow to the river, is now conducted through the ditches. The springs which burst up to the surface in various places, spreading very cold water around to chill the land, have changed their outlets, and may now be seen bubbling up every few rods along in the bottom of the ditches. It is quite curious to observe how far, in some instances, a spring has removed its discharging place, to indulge its hydraulic propensity for the lowest level.

The lay of the land was generally favorable for passing the water off the surface into the ditches; there were occasional slight depressions, or dishing places of various extent, which must be smoothed up to the general surface. This was done by plowing down the crowning places surrounding them, and removing the furrows into these little hollows, with the oxen and scraper. The process of leveling was not expensive, being very rapidly done with plow and scraper; but it was quite indispensable, however, for otherwise, after an overflow from the river, the dishing places would not have discharged themselves cleanly, and the water remaining in them to stagnate and pass slowly off by evaporation, would have chilled and poisoned the ground, killing out the cultivated grasses and bringing in the swale again.

The meadow thus ditched and levelled up, became dry enough for plowing and seeding to grass during the fall of 1851. But it would have been too great an undertaking to fit the whole of it for mowing, in one year. Accordingly so much of the land as could be conveniently managed at one time, say about ten acres, was plowed in October. The breaking of the sod commenced with the largest plows then at command; but we very soon saw that thorough work could not be done with them. The swale was very stiff and ugly about turning over. The coarse water-grasses had held possession of the land from time immemorial, and were so deeply and thickly set as to form a sward almost impenetrable by a common plow. The roots of the grasses were very large and tough, and would double over the edge of the plow-share, so

as to throw the plow out of the ground. It was found that in order to turn the swale over handsomely, we must have a plow large enough to go entirely below the sod; and which, with a long and wide-winged mould-board, should be able to carry a deep and wide furrow-slice, giving it that powerful twist which should compel it to lay over, grass side down. Such a plow was at once procured. With the great plow, drawn by three yokes of oxen, the swale was thoroughly and handsomely turned over, to the depth of nine or ten inches. In the winter following, over two hundred loads of compost, made of upland loam and barn manure, were carried by sledding on to the highest places in the meadow, and deposited in large piles. In June and July following, when the ground had become dry enough to work kindly, the manure was spread over the plowed land, at the rate of twenty to twenty-five loads to the acre, and plowed in lightly, say three to four inches deep. The land was then harrowed fine, and stooked down with one-half bushel of herds-grass, one bushel of red-top, and twelve pounds of clover seeds to each acre, and the surface was smoothed with a light one-horse roller. The grass came up quickly, and having full possession of the land, it got well rooted that season, covering the ground with a thick mat, so that the winter and spring floods did not kill it. This was the result sought for, and it was found that the plans were well laid for securing it. The following year ten or twelve acres more of the bog were treated as above detailed; and the year after that, nearly all that remained of the unimproved land was reclaimed in like manner.

As the meadow is now fixed, it is never too wet, except while overflowed by the river; and the water in such case recedes just as fast as the river falls again. Indeed, the flooding of the land is now highly salutary, the water not continuing on it long enough at a time to kill the grass, but on the contrary nourishing it by depositing a rich sediment and moistening the soil about right to produce a thick fine bottom, and a heavy crop. Before draining and reclaiming the land, an ox team could only be driven over the higher portions, in a dry time, miring considerably at that; and a man could not mow the grass in the wettest places without going over shoes in water. Now, the cartage is good over any and all parts. The ditches will need clearing out once in two or three years; but the sediment thrown out will prove very fertilizing to upland soil, and pay a great profit on the labor of getting it. If the ditches are properly attended to, no reason is now seen why the meadow may not be productive of good grass for an indefinite period. The change wrought by reclaiming the land is very striking, and the barns look after haying as though an additional farm had been added to the estate.

F. H.

*Brattleboro', Aug. 25, 1856.**For the New England Farmer.*

APPLES AND INSECTS.

The apple crop will be very light in this region. There was no lack of blossoms. Fruit, in great abundance, formed and held on, until about the middle of June, when it began to fall, and the first of July, but little remained. The falling apples, in addition to the usual perforations, many of them had carious spots, which indicated that they had been punctured with an instrument similar to that used by the curculio.

I wish some of your contributors, Mr. Editor, would tell us whether this is the work of a new enemy, or an old one in new guise. The number of these ruffians is already legion, and we may well pray that it be not enlarged.

I am sorry to announce that the borer has made his appearance hereabouts. While committing his ravages, in the eastern and central portions of this State, we were exempt. But now the sneaking varmint has made his entree into the valley, and is making his mark upon every orchard.

Our farmers and gardeners have not yet made the acquaintance of his ugliness, and probably will not, till he has done more damage. Those who have young orchards, and would preserve them, must look after these chaps. There is no safety in delay. The proper place to meet ruffians is on the border, and dispute the entrance. Let them once worm themselves into the territory, and nothing short of hard fighting will expel the graceless villains.

Precautionary measures should first be taken, the grass and weeds should be removed and kept from the body of the tree, the bark, from the roots to the limbs should be thoroughly scraped and washed frequently, say three times in course of the season, with some liquid that will be offensive to the insect. A solution of potash, not too strong, or a ley of wood ashes, or whale-oil soap, dissolved in water, with 2 oz. of sulphur to one gallon of water, makes a good wash. Assafoetida, barn manure, and other offensive matters may be added, and a little clay mixed, to make it adhesive. This may be regarded as a sectional movement, calculated to produce agitation, and even endanger the Union.

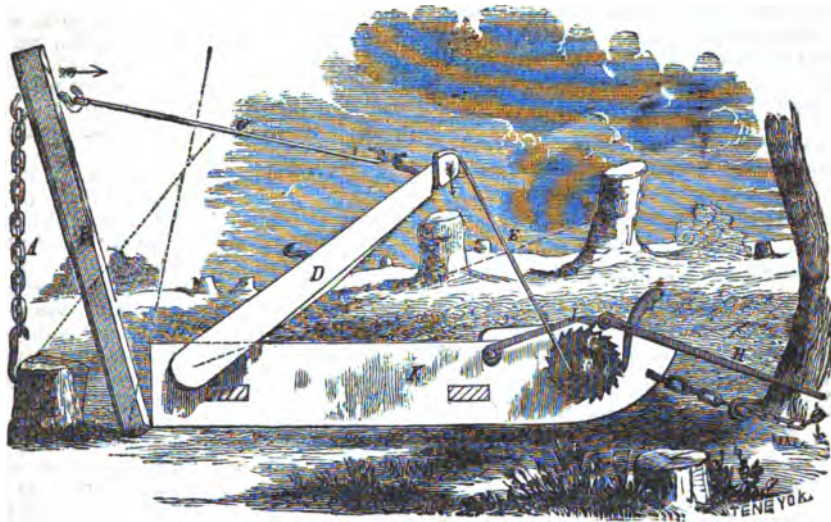
If let alone, the enemy will secretly sap the foundations of the tree, and thus settling the extremes of variance, when discordant winds arise, agitation will follow, and the Union of vitality with the physical constitution will be dissolved.

Next, frequent examinations should be made for the worms. They remain and work in the tree two seasons; if caught and killed during the first, the injury will soon be repaired in a vigorous tree. If suffered to remain during the second season, and till full grown, the injury may, and in most cases will be irreparable.

I hope, Mr. Editor, none of your readers will suspect me of political squinting, in my remarks. The farthest possible from it. I have been writing about civilized ruffians, and nothing more.

Amherst, Aug. 25, 1856.

CRAMP.—Those who may be subject in the night time to that excruciating pain called cramp, will doubtless be glad to learn that by tying any kind of a bandage very tight around the leg, immediately above the knee, this unpleasant sensation will be instantaneously removed.



A NEW STUMP PULLER.

We have not seen this machine in operation, and know nothing, personally, of its merits. The description below we find in the *Scientific American*.

The above engraving shows a recent improvement in stump pullers, for which letters patent were granted to Mr. Solomon W. Ruggles, Fitchburg, Mass., May 6, 1856.

The chain, A, is attached by a hook at one end, to the stump, and at the other to a strut, B; this is connected by rod, C, with lever, D, the forward end of which has a strap, E, which winds around the shaft, F; this shaft has a ratchet wheel, G, upon it, operated by lever, H. When the lever is raised, the pawl, I, catches in the teeth of the ratchet wheel, G, and turns it in direction of the arrow; the pawl, J, holds the purchase obtained, and prevents the ratchet wheel from turning back. By the winding of strap, E, on shaft, F, the lever, D, is brought down, strut, B, raised to a perpendicular position, and the stump pulled. Most of the parts are attached to the sled, K, on which they are conveniently transported from place to place.

This machine is very compact, portable, and economical to manufacture. It is also very powerful. A force of 200 pounds applied to the end of lever, H, will lift 2000 tons on chain, A. The power of the apparatus is only limited by the strength of the wood and iron of which it is made.

BEES.—The raising and management of bees has of late become something of an art. The old whim that success in the keeping of bees was altogether a matter of "luck" is now pretty much exploded.—To be successful in the production of honey, requires constant and vigilant attention, and a knowledge of the habits and wants of this most industri-

ous of insects. In this climate, the bee has much to encounter. In addition to the length of the winter, there are the moth and the ant, the most dangerous and unyielding of foes, both of which can only be kept from injuring the swarm by the use of suitable hives and the vigilance and care of the keeper. When, however, a skilful attention is given to it, the making of honey becomes profitable, even in New Hampshire. Mr. George Simmons, of Weare, commenced the experiment some four years ago, with two swarms, and has not only found it profitable from the sale of honey, but has now thirty swarms to be kept through the winter. Mr. Burns, of Goffstown has also been successful in the management of bees, having made \$200 net profit from them in a single season.

For the New England Farmer.

THE KOHL-RABI.

MR. EDITOR:—Through the kindness of my Representative in Congress, I received in the spring a package of seeds from the Patent Office, which I planted. Among them was Chinese sugar cane, or sugar millet, which is now eleven and a half feet high by measurement; but I think I have seen a statement that experiments were made with it some years ago, and that it did not prove of much value. I should think it would make good feed.

Another paper was marked "Kohl-Rabi," a sufficiently mysterious title, and I planted it, not knowing whether it would come up a lion or a unicorn. It did come up well, and behaved itself at first, something like a young cabbage. It has since been engaged in turning itself into a turnip, but, for all the world, one that grows *above ground*. Having room enough in my little garden, I planted

"Kohl-Rabis" all about, for I rather guessed they were some kind of cauliflower, which I love; but, Mr. Editor, what am I to do with these critters? Are they food to eat? and what part do you eat—the turnip part or the leaves, or is there another story underground? How do you cook them—with pepper and mustard, or boil them in vinegar, or eat them raw? I feel like the man with the elephant, with all these "Kohl-Rabis" about the garden. By throwing light on the subject, you will relieve the mind of your obedient servant.

September.

IGNORAMUS.

REMARKS.—Resolve yourself into a "tasting committee," and "smelling" too, if you please—first taste the branch and then the root, in its raw state. If not perfectly satisfactory, boil, or bake, or stew. If unpalatable in any way, try them with your cow or horse, and you will find that they will eat a "bulb-stalked cabbage" as readily as any other cabbage. It is the *caula-rapa* of the Germans, and pretty poor fodder at that.

For the New England Farmer.

TOMATOES—PICKLES.

DEAR FARMER:—Somebody would like to have you tell them how to make tomato ketchup. Here is Mrs. Swisshelm's rule, and it is a good one; she says, "Our plan of making ketchup is to have the tomatoes taken ripe and fresh off the vines, wash them clean in cold water, and put them immediately into the kettle, crushing each one in the hand as it is dropped in; hang them over the fire, and stir occasionally until they boil about five minutes; then strain, first through a colander and next through a sieve. Get the liquid over the fire again soon as possible, boil, skim and stir, while your patience lasts, or until it is reduced one-half; if two-thirds, all the better. When boiled enough add to every gallon of this condensed liquor two teaspoonsful of salt, an ounce of cayenne pepper, the same of black pepper and cloves, a pint of good cider vinegar, an ounce of mace and four of cinnamon; jug or bottle it, and it is ready for use."

The same body is more fortunate than we, and has cucumbers for pickles; here is a West India method, and this is a good one:

To every 100 cucumbers put one pint of salt, and boiling water enough to cover them, shut them close to keep in the steam; 24 hours after wipe them dry, taking care not to break the skins, lay them in jars or firkins and pour over them boiling vinegar sufficient to cover them. Cloves, allspice and mustard should be put in a bag and boiled in the vinegar. In a fortnight they will be ready for use. When pickling citrons, alum instead of salt should be used to scald them in, and a large spoonful of sugar to every quart of vinegar added. The citrons should first be cut and the seeds removed. This makes "sweet pickles." I tried cutting the cucumbers so as to leave a small piece on the stem, and split the pieces according to directions in the *Farmer* some weeks since. A few days after I went to see how my little cucumbers were coming on, but instead of finding any, all that was left on the stem had rotted.

M. A. K.

Fitzwilliam, Sept., 1856.

For the New England Farmer.

MANAGEMENT OF STOCK.

MR. EDITOR:—It seems to me, there is no subject which ought to interest the farmer more at this season of the year, than the management of stock. Yet it seems to me also that there is no subject upon which there is so much ignorance, if we may judge by men's actions. I say ignorance, because it does appear to me that if men were not ignorant, they would adopt a more humane, and at the same time a more economical course in the treatment of their cattle. My object in writing is to call the attention of my neighbors, and brother farmers, to this matter, and see if after a little conversation they cannot be induced to "turn from the error of their ways." Sometimes for the credit of the race I think it is through carelessness, or for the want of thought, that men will allow (or rather compel) their cattle to stand out exposed to cold and storm, while they themselves are in the village store talking of some late horse trot, or exaggerating the small faults of some neighbor.

I must confess, Mr. Editor, that I was offended the other day, as I passed by a farmer's, and saw his cattle standing out in the storm and wind, with nothing to eat, while he was away hunting down some stray fox, which had done less mischief than his own dogs. It is the practice of many farmers in this vicinity to feed their cattle twice in the morning, then carry some hay or straw to the yard, or nearest fence, and after going to the brook to chop the ice, leave them to their fate until nearly night. And what are the reasons given for this course? One is, that they will eat better out of doors. Another is, they like to be in the sun. Now if an animal is properly fed and cared for, they will eat all that is necessary for them to eat, and all which is fit for them to eat in the barn. And as for being in the sun, I think if the owner himself were to stand out of doors from morning until night, he would prefer to be in the sun.

But there is another great error of which I must speak at this time, which is this. If a farmer has meadow hay or other poor fodder, he brings his cattle to the barn, and commences feeding it out to them first, and continues the same feed until it is used up, and as might be expected by any thinking man the poor animals look as though they had arrived very near the same point. And so I might go on and mention many other things which are little better, but will not contemplate this side of the picture longer, lest this intended criticism should be called a stupid fault-finder.

Come, brother farmers, examine this matter, and see if we cannot find out a better way of managing our stock; one which shall administer greatly to their comfort, and to our own happiness, by seeing them look sleek and fat. If this should meet with a notice from you, I intend to write you a few lines upon the other side of this matter, and state some things which I hope may be of some benefit to those who have not yet given much attention to this subject.

AMPLIFICATOR.

West Brookfield, 1856.

REMARKS.—This article has been delayed too long—shall be happy to hear from the writer again.

☞ Half an ounce of alum in powder, will purify twelve gallons of corrupted water.

For the New England Farmer.

GRAFTING—PLUMS—PEACHES.

Two years since, I purchased of N. P. Morrison, of Somerville, (the "apple man" of the *Farmer*), scions of the Red Russet and Hubbardston Nonsuch. Mr. Morrison, who is a skilful and successful orchardist, directed me to graft all the stocks that were to be grafted in a tree the first year, to cut out all the old wood that remained the second, and prune off the sprouts the third year. His orders have been closely followed, and now, the third season, I find blossoms on trees grafted with both varieties. The Red Russet has made a growth of wood fully equal to the Baldwin, which is a standard of growth and bearing. Mr. Morrison tells me this apple equals in long keeping the Roxbury Russet, and in size, quality and appearance, the Baldwin, which it much resembles. I obtained at the West, and have grafted since my return, several varieties which are new to me. The Twenty-three Ounce apple, which I have heard of only in Illinois, the Twenty Ounce, which originated and is extensively grown in New York, the Mammoth, Holland Pippin and Beauty of Kent, all very large; the beautiful little Lady apple by way of contrast; the Northern Spy and Red Astrachan. The Twenty-three Ounce is a dark green, sweet apple, long keeping, and reaches its maturity or is eatable, the last of winter or first of spring. Specimens have been raised in Illinois weighing twenty-six ounces. The Twenty Ounce is a greenish-yellow and red subacid apple, in use from November to January. I am told by those acquainted with it, that it is a great grower and bearer, and that specimens are often raised weighing twenty-four ounces.

Decidedly the finest apples, as far as appearance was concerned, on the tables of the N. H. Agricultural Society at their fair at Manchester, in September last, was the Mammoth, raised by Mr. Leverett, of Keene, who received the premium on apples. Aware that beauty among apples, as well as people, was only one of several requisites, I applied to Mr. Leverett for information concerning the Mammoth, and was told that it was superior in quality, growth and productiveness. That it is so in size its name indicates.

It is an object with me to secure a succession of fruit, which every farmer may do with little trouble or expense. With this object in view, I have grafted russetts that keep till the Red Astrachan ripens, about the last of July; the Bloodgood pear, that ripens in August, succeeded by the Bartlett in September, and others before mentioned, and a succession of plums, from the Peach in August to the Blue Egg that hangs till the frost comes. The Canada stock is generally preferred for grafting the plum, on account of its hardiness. It has been supposed the plum must be grafted very early. One of my neighbors grafted scions of the Yellow Egg into a small Canada tree in the latter part of May, when the tree had blossomed and was leaved out, and the second season had a quart of plums from the same. Encouraged by his example I have grafted at the same time, but my success remains to be determined. I find the low or dwarf training general among the nursery men of New York. They say they intend to keep their trees so low that they will never be obliged to use a ladder when picking the fruit. Root grafting is preferred by them. When the seedling trees are two years old they are taken up,

the tops cut off and thrown away, the roots cut into two or three pieces, and each piece grafted and planted to form a new tree. They cut scions in November, when in the dormant state, and keep them in the cellar in damp moss. In this way they may be kept all the year round. Some of the finest of my young trees are victims of the borer, which is committing great depredations in this vicinity. Can the editor or his correspondents suggest a remedy? Disbarking is recommended by Cole and others. I have a lot of old rough bark-bound trees, and I should think disbarking a more effectual remedy than scraping and washing. It is an experiment that I have never seen tried. Will those acquainted with the subject give me their experience or observation, through the *Farmer*.

I think the statement originated with Cole that most of our apple trees yielded the heaviest crops in even years—1850, '52, '54, and the lightest in odd years—1851, '53, '55. This statement has been true in regard to New England, as far as I have known, especially, with our leading apples, such as Baldwin, Greening, &c., until 1855. So true that the grafts of a single Baldwin tree in my neighborhood, which, unlike the rest of its kind produced a heavy crop in the odd year, were in great request, as it was supposed they would derive their habits from the parent tree, but last year this habit was reversed, our orchards were white with blossoms and loaded with fruit, while this season the blow is very small. Can any one explain this phenomenon? I am told by experienced orchardists that west of New England the greatest bearing has uniformly taken place in odd years.

I believe Cole the best authority on the subjects on which he treats, as his views were derived not from theory alone, but were the result of thorough experience and practical information. I would therefore recommend his Fruit Book to the pomologist as I believe it contains a greater amount of useful information on that subject than any other book of the same size, and would be worth more than its cost in one year to the fruit-grower who owns but one apple tree.

G. J. SMITH.

Washington, N. H.

For the New England Farmer.

MONTHLY NEW ENGLAND FARMER.

MR. EDITOR:—I am pleased to hear of the general success, and increasing patronage of the *New England Farmer*. One of the distinguishing excellences of this publication, and one that adds much to its value and usefulness, is its monthly issue. By this arrangement, that part of the paper possessing the most permanent value, its agricultural department, is published in a monthly periodical, in a form most suitable for binding and preserving. Were all this great amount of information, so valuable to the cultivators of the soil, confined to the weekly issue of the *Farmer*, it would soon be lost for all useful purposes, even if the papers were preserved and bound, as it would form an unwieldy volume, containing a large portion of comparatively useless reading, and being without an index, or at best, a very scanty one, where nothing could be found when wanted. This enduring form of the *New England Farmer* should, and undoubtedly does give to its correspondents, and more particularly to its editor, a

feeling of responsibility, when they consider their thoughts, as exhibited on the printed page, are to be read by future generations. I am also pleased to learn of the success attending this paper, and the prospect of its long continuance, from the increased value it acquires, the longer it is published. A continued series of a work, treating upon a subject of so much general importance as agriculture, can not but be enhanced in value, as it increases the number of its volumes. And while it fully sustains the reputation of its former namesake, whose mantle has fallen upon it, I hope and trust it will receive the patronage it so richly deserves.

Yours with respect, S. P. FOWLER.

Danvers Port, Aug. 20, 1856.

REMARKS.—The cheerful view of the *Monthly Farmer*, taken by our intelligent and respected correspondent, is encouraging to us. We should feel it to be a great loss of labor, both of body and mind, to make all the exertions we do, and incur such an expense as we are obliged to for a mere weekly paper. It is inconvenient in form, and is ephemeral in its nature. Few expect to preserve it, or have a place to keep so unwieldy a sheet. The majority of the agricultural articles we publish are written with care, and give actual facts and experiments, and are as valuable for one year as another. The *Monthly Farmer* is, perhaps, the most valuable as a book of reference.

LABELS FOR FRUIT TREES.

Much of the confusion of nomenclature of fruits arises from the little precaution generally used to preserve the names. If, when a tree comes into bearing, the fruit is found to be particularly fine, persons at once desire to obtain grafts, and for want of a better name they attach that of the person from whom the grafts were obtained, although in most cases the fruit is well-known to pomologists by another name. Nurserymen also frequently perpetrate errors in the same way. There are doubtless many fine seedlings with local names only; but in a large majority of cases these local names are given to old and well known fruit. To guard against such errors and correct those already existing, will be the work of Horticultural Societies and individuals who are well acquainted with the common fruits of the country; but the greatest safeguard against the repetition of them in future is the careful marking of every young tree set out. Though, in addition to putting the names on the trees, we advise the further precaution of plotting out the ground of the orchard on paper, and marking the locality of each tree with its name. This once carefully done, removes the possibility of errors.

The labels which come from the nursery on trees are not designed to be permanent, and they should be replaced with permanent ones at the first leisure after planting. Be particular that the wire by which the label is attached is not round the body of the young tree, otherwise it will, as the tree grows, be buried in it and materially injure the tree. The very best label we have ever used is a strip of thin sheet zinc, about four inches and three-fourths of an inch wide at one end, cut so as to taper to a

point at the other end; which after writing the name of the tree, the date when set out, and when obtained, can be bent round one of the small branches, with the writing outside, and as the branch grows it will expand without injuring it.

The ink for writing on those labels is made thus: Take of verdigris and sal ammoniac each 2 drachms, lampblack 1 drachm, water 4 ounces, to be well mixed in a mortar, adding the water gradually. It must be kept in a glass stopped vial. Write on the zinc with the ink, after shaking it well, in a quill pen; and after it is dry you may expose it to the weather or bury it in the ground for years, and it will be as legible as when first written.—*Louisville Journal*.

NATURE THE WORK OF ONE MIND.

[The unity of God's works, as brought to light by modern science, was the theme of Prof. Agassiz, in his address at the dedication of the State Geological Hall at Albany, a few weeks since. His remarks, which are very interesting, were as follows:—]

Ancient philosophers studied only morals. Then they took up speculations of astronomy and of physics. Only recently has philosophy turned its attention to the study of plants, of animals, and of the crust of the earth. These studies lead them irresistibly to the conclusion that Nature can only be the work of an intellectual Being—of Mind,—of an Individual God.

Everywhere there is a diversity among organized beings. Everywhere we find types among them that are identical. The two facts, taken together, show that all organized beings have been ordered according to a plan. Thought is visible everywhere; in geological distributions, in organic structure and gradation. Everywhere there is an intellectual connection running through the whole.

Were we not intellectual beings, allied by the nature of our intellect to the Maker of these, we could not read them. That we can trace the plan, is proof of our mental affinity to the Being that planned it.

For an illustration of this universally appearing plan, take the human arm. It has an upper socket, next a large single bone, next two smaller bones, next the smaller bones of the wrist, next the diverging bones and joints of the hands and fingers. Now take any animal that walks, or creeps, or runs, that has limbs, and you will find the same bones in the same consecutive arrangement. Even the fish, unlike as it appears to a human being, has in its fins what might be a copy of the bones of the human arm. This chain of resemblances shows that one intellect controlled the whole, and ordered them alike. Why should they all be constructed—how could they all be constructed on the same plan, unless they were constructed by the same hand?

The same resembling adaptation of means to ends we find throughout all created animals and plants. Their diversity is in special expressions, their unity in general design.

A fish and a bird, unlike as they look, have the same general anatomical structure. There is the vertebral column, there are the bones diverging from it, there are the cavities above and below, in each. Nay, more. Thousands of fish and birds,

thousands of snakes, turtles and quadrupeds, and so on up to man himself, all are alike in these particulars.

Look at the lizard. There are a vast number of lizards distributed over the globe, differing from each other mainly in the number of their legs. One kind has none. Another has hind only. Another both. One has a single toe, another has two, another three, another four, another five. When brought together in a museum, it is evident that they are variations of the same great family. But to find them you must go all over the world. For one kind you must go to Bengal, for another to Australia, for a third to the Phillipine Islands, for a fourth to South Africa, for a fifth to the Cape of Good Hope, for a sixth to South America, for a seventh to Europe, for an eighth to the United States. They are scattered about the earth, wide as the poles apart, and yet they form, when brought together, a system that we read at a glance! How else could they have been formed, unless by an Omniscient, Omnipotent, Provident Creator?

The development of animal life from infancy to maturity, shows the same working of a single intellect. This development during the lifetime of an individual corresponds closely to the gradations from lowest to highest, of the whole series to which the individual belongs. Thus in one series of animals, we have the lowest the Worm, next above it the Crustacea, such as crabs and lobsters, with partially developed legs and head, and next above that the Insects with perfect head and six legs fully formed. Now, how does the insect develop?—Why, in its first stage, it it a worm or caterpillar. In the next it is a chrysalis closely resembling the Crustacea. In the third it is a perfect Insect. It goes through as many gradations in its lifetime, as there are gradations below it in its existence. Here, then, is thought, but thought reaching the same result, through two different processes, in two different series.

Just so, the animals of former ages were different from those of the present one, and the whole series has been gradually developed on similar principles. Just so the Crustacea now existing, exactly resemble, in their different stages of growth, the different and successive fossil crustacea found in the geological beds. The crab when but a germ, is like a tri lobite, the oldest fossil found. As it goes on to maturity it passes through stages each of which resembles another and another fossil, found in succession, each more complete than the preceding.

In the vegetable kingdom, the principle holds. Leaves form regular series. They are arranged according to a regular succession of numbers or fractions. Consider a blade of grass. Its leaves spring alternately on either side. Commencing at the bottom of the stalk and going up spirally, you find the second leaf on the opposite side from the first, and exactly over it, the fourth over the second, and so on. You go spirally half way round from one to the other.

Now take marsh grass. Its blades are arranged round the stalk in the same way, but the distances are different. The second blade is one-third of the way around the stalk from the first. The next is two-thirds of the way around, and so on.

Take now a rosebush stem. The second leaf is distant from the first, two-fifths of the way around the stalk. The others follow each two-fifths far-

ther around, until finally the sixth is just over the first.

Take again a pine tree twig. The second blade is distant from the first three-eighths of the way around, until finally the ninth blade is exactly over the first.

Other plants have their leaves arranged each distant from the other five-thirteenthths of the way around the stalk.

So that we have a series of fractional distances, thus:—

1-2 1-3 2-5 3-8 5-13

These fractions, it will be seen, do not differ much from each other. There are none of them less than 1-3, and none of them more than 1-2. They form a regularly ascending series, in which any two added together will make the third. Such is the uniform and careful arrangement of the countless leaves of the elms above our heads, and of the pine forests of yonder plains!

Turn now from plants to planets. Measure the time in which each of them circles the sun. It is here:—

Neptune.....	62,000 days.
Uranus.....	31,000 "
Saturn.....	10,000 "
Jupiter.....	4,330 "
Asterodia.....	1,800 "
Mars.....	680 "
Earth.....	365 "

Now examine these sums. The second it half the first; the third is one-third of the second; the fourth is two-fifths of the third; the fifth is three-eighths of the fourth; the sixth is five-thirteenthths of the fifth. So that we have again precisely the same fractions in the same order:—

1-2 1-3 2-5 3-8 5-13

Whence this strange similarity? How can it be accounted for except by the fact that the same Hand adjusted the blades of grass, which set in motion the Orbs of the Universe?

For the New England Farmer.

APPLES.

MR. BROWN:—In this part of Massachusetts, from all I can see and hear, I fear that this noble fruit is likely to be very scarce this season, although it is generally regarded as the "bearing year." In his "Fruit Book," Mr. Cole says, "We never knew a great crop in an odd year, nor a small crop in even years." Eighteen hundred and fifty-six is an even year, yet we are likely to have less apples in this section than we have had in any past year, odd or even, for a long while; and I fear the remark will apply to New England generally. On a recent trip to Vermont, I examined the trees on the way as carefully as the dust and smoke and speed of a railroad train would allow, and saw but few apples any where. The past winter was supposed to be favorable to an abundant supply of fruit, and with the exception of apples and peaches, fruit has thus far been unusually plenty. One of your correspondents proposes to distinguish this as the blackberry year. In Vermont whole hill-sides were red with raspberries.

What, then, ails the apples? Some people now assign unfavorable weather at the time of blossoming as the cause of the failure. In Vermont it was said there were but few blossoms. Here, it was

remarked that the trees were uncommonly full. One of my neighbors said that I ought to have twenty barrels of apples from a young orchard, that showed as handsome a bloom as I ever saw. Of sound marketable apples, I shall not probably gather so much as a bushel, from the whole orchard.

Now, Mr. Editor, I wish to say that I believe the curculio to be the cause of the failure of apples in this section, at least; and fear, that henceforth, it will be as difficult to raise apples, as it has been for many years past to raise plums; and consequently, that those who have given up their plums to this insect, must now give up their apples also, or devise some means for its destruction. I shall, however, be very happy to see cause to change or modify this opinion, which I have stated thus dogmatically, partly for the purpose of calling out an expression from those more experienced and more observing in these matters than myself, but mainly because I think I have seen enough of the operations and of the rapid increase of this pest, within a few years past, to justify the statement here made.

S. FLETCHER.

Winchester, Sept., 1856.

YOUNG MEN.

Whatever may be your choice of future occupation—whatever calling or profession you may select, there is certainly none more honorable than that of a farmer. The patriarch of the fields, as he sits beside his cottage door when his daily toil is over, feels an inward calm never known in the halls of pride. His labor yields him unpurchasable health and repose. I have observed with more grief and pain than I can express, the visible tokens which appear in all directions of a growing disposition to avoid agricultural pursuits, and to rush into some of the overcrowded professions, because a corrupt and debasing fashion has thrown around them the tinsel of imaginary respectability. Hence the farmer, instead of preparing his child to follow in the path of usefulness himself has trod, educates him for a sloth; labor is considered vulgar, to work is ungentle, the jack-plane is less respectable than the lawyer's green bag; the handles of the plow less dignified than the yard-stick. Unfortunate infatuation! How melancholy is this delusion, which, unless it be checked by a wholesome reform in public opinion, will cover our country with wreck and ruin! This state of things is striking at the very foundation of our national greatness; it is upon agriculture that we mainly depend for our continued prosperity, and dark and evil will be the day when it falls into disrepute. What other pursuit offers so sure a guarantee of an honest independence, a comfortable support for a dependent family? Where else can we look but to the productions of the soil for safety of investment, and for ample return? In commercial speculations all is chance and uncertainty, change and fluctuation, rise and fall. In the learned professions scarce one in ten makes enough to meet his incidental expenses; how, then, are we to account for this fatal misdirection of public opinion?

The cultivators of the earth are the most valuable citizens. They are the most independent, the most virtuous, and they are tied to their country, and wedded to its liberty and interests by the most lasting bonds.—*Jefferson.*

WORCESTER NORTH CATTLE SHOW.

The Fourth Annual Exhibition of the Worcester North Agricultural Society took place at Fitchburg, on Friday last. The weather was pleasant, and all things seemed favorable. The attendance, through the entire day, was very large. The women and children made up at least one-half the number, and their faces indicated the enjoyment they found in the duties and attractions of the Farmer's Festival:—And this is one of the great merits of these gatherings,—that all who have labored in promoting the articles of growth or manufacture which are presented, may participate in the Exhibition, and share the honors it confers.

The whole centre of the romantic and beautiful town presented the scenes of a gala day; and the charming natural scenery added grace and grandeur to the whole. The narrow vale was vocal with glad voices, and the gentle babblings of the lively stream, now dancing over the stones, or bending the grass on its borders, as it went on its way to turn the thousand wheels of industry below. Up, almost overhead, sat the hills, serene in majesty, looking upon the enchanting scene in the valley beneath, or, as the changing clouds partially obscured their summits, seemed approaching and lovingly kissing each other.

The common was crowded with cattle, horses, sheep, swine, carts and carriages of every description, even down to the "Donkey Express," with his load of baggage for the next train. Pedlars, good, honest pedlars, enlivened the scenes with their oratory and songs—buns, beads and popping beer had a lively sale, and horse cakes and gingerbread, apple pies, tarts and tongue, allayed the cravings of the half-famished children, who had come a long way over the hills that morning.

In a quiet green spot, just off the highway, and where they would not trample the infants or jostle this mothers, the horses were admirably arranged, and could be seen with comfort.

Happy young ladies crowded the open windows and balconies, so intent on the attractions below, that they, *perhaps!* did not notice the *young gentleman's heads* promiscuously mixed in with their own! But it was all right. Stoics and old bachelors, alone, would be untouched and look on such a group with indifference!

Our first critical examination of articles presented was in the large town hall, where the fruits and articles of domestic manufacture were exhibited. None of the fruits were in large quantity, but there were samples of great excellence of apples, pears, peaches, a few plums, and several varieties of grapes. Indeed, "in this poor year for fruit," we were most agreeably surprised to find in the northern part of Worcester county an exhibition in Pomona's kingdom, which would reflect credit upon any Horticultural society. They were also ar-

ranged in good taste, and were properly attended. The crowd of ladies was too great about the capes, collars, akirts, embroidery, and "dimity" generally, for us to attempt anything like a thorough look at them. We saw enough, however, over the shoulders of the fair throng, to satisfy us that there were many articles of rare merit among them. A piece of embroidery hanging at the end of the hall, was of pre-eminent excellence. In a room underneath, were the vegetables, but there was nothing remarkable among them, excepting a few fine pumpkins, and some very large marrow squashes.

Few implements of any kind, or carriages, or harnesses, were presented.

The stock department was well sustained. There were fine specimens of milch cows, of various blood, and also of heifers, calves and steers. Among the working oxen, numbering some seventy or eighty pairs, there might be seen several that would be a credit to any county. Dr. Field, of Leominster, had a bull and cow of the pure Alderney blood; the bull was the finest we have seen this autumn. The trial of the working oxen was witnessed by a large number of people, with much satisfaction. The plowing match had some fifteen contestants, and the work, we understood, was well done.

The show of swine was good, but not large in number. There were a few sheep, mostly cossets, and a variety of poultry, and among the latter, a coop of very beautiful white turkeys.

The butter and cheese all looked well, and so far as we tasted, the butter could not easily be excelled.

Altogether, these bounties of the soil, and products of skill, must have made a strong impression upon the mind of every attentive beholder, and serve to convince him that the earth will always yield a proper reward to him who cultivates it with industry and intelligence.

"These are thy blessings, Industry! rough power!
Whom labor still attends, and sweat, and pain;
Yet the kind source of every gentle art,
And all the soft civility of life:
Raiser of human kind!"

We would suggest to our friends, as a crowning excellence to their festival, that they adopt some mode to fill the house with people to hear the address, and keep all noise away from it, and so arrange matters as to have two hours, at least, at the dinner table. Our thanks are due the officers of the Society, some old friends, and especially to Gen. WOOD, for kind attentions during the day.

STEAM PLOWING.—Since 1850, no less than thirty-five patents have been taken out, in England, for the application of steam to plowing. In a late number of the *Prairie Farmer*, we notice that Mr. John Percy offers to sell himself "a slave for life," in case of his failure to equip a machine that shall

"turn over, sow and harrow eleven acres per hour, or one hundred and eleven acres in ten hours," provided any person will furnish him with \$5000! Whether the "Calliope" is to be attached, we are not informed; but certain it is, that the "good time coming" cannot be far distant, if Mr. Percy can perform all he promises to do with five thousand dollars.

For the New England Farmer.

THE FARMER'S HARVEST HYMN.

We thank Thee! Oh God of the seasons,
Thy power is around us alway;
Thou givest us rest in the night time,
Thou givest us labor by day.
We scatter our seed in the spring time,
Trusting strongly thy promise of old;
We gather our harvest in autumn,
The bright corn-ears glistening like gold;
We go forth rejoicing in summer,
The grass-field waves bright in the sun;
With our scythes sharpened brightly and keenly.
We cut it ere noontime comes on.
In autumn the leaves falling around us,
Reveal the ripe fruit on the trees;
Our hives are filled up with fresh honey,
By the labor of our busy bees.
In winter, the poor and the needy
Require a kind word or kind deed,
Thus passes the life of the farmer,—
What more can man wish for, or need?
True, we labor, but labor's a blessing,
'Twas no curse of our God when he said,
"In the sweat of thy brow thou shalt eat it!"—
We are willing to work for our bread,
And we're happiest thus to be fed.

MR. BROWN—*Dear Sir*:—I promised you, some time since, conditionally, to give you an article occasionally for the *Farmer*. I have tried to do so, but with 6 or 8 hands to find in work through hay-time, and such a haytime as we have had this year, it has been impossible. I am bound to have no idle help on my farm. One of my men was a true Yankee, and could turn his hand to almost anything. One was a shoemaker, and these two I had no difficulty to keep employed through the weeks, when we have had four days out of six rainy; but with the others it was a more difficult matter, requiring a good deal of calculation and mental labor, and leaving me but little time for anything else.

I therefore send you the above little song of mine. It expresses my idea of a farmer's life, labors and enjoyment completely. I hope it will be responded to, should you think it worth a corner of your paper, by many of my brother farmers.

Westford, Sept. 1, 1856. L. H. HILDRETH.

TO CORRESPONDENTS.—The article on "Swallows," signed "Sixteen," is well written, but contains no new facts on the subject. We feel obliged to our young friend for his attention. The one on "Shooting Hens" will be seasonable in April, and will be preserved. Several other articles, of too great length, or where the subject has already been fully treated, and some for want of adaptation, are inadmissible.

PRESERVATION AND USE OF AGRICULTURAL JOURNALS.

As the volume of most periodicals closes with their year, it is an appropriate time to make some suggestions upon their use. To begin with—Carefully preserve your agricultural papers. After reading the papers as they come out, have a place for them where you can lay your hand on them at any moment, when waiting for meals or for anything else. A distinguished scholar is said to have acquired a language in odd moments, when waiting for breakfast. Every farmer has at times leisure in his family, which may be well occupied in referring to facts which have excited his interest in the first reading of the papers. Have a place, then, for them; and be very careful how you lend them. If your experience is anything like the writer's, it will be a losing business, both to yourself and to the borrower. Ten chances to one, the paper will not come home at all, or if it come, it will be minus one or more leaves, or plus a little *soil* which has ceased to be *free*. In that case, your volume is broken or injured for binding, and you are the loser. It is equally a bad operation for the borrower; for so long as he lives by borrowing he will not take and pay for an agricultural paper for himself, and what he reads or learns of his business will be superficial. "A little learning is a dangerous thing" in farming. Better pay for a second paper for your neighbor than to be without your own. The merchant might as well lend his ledger, the scholar his text-books, or the Christian his Bible.

At the close of the volume bind up the numbers, and put them on the shelf among the books. If you are flush, and live near a book-bindery, get the man of sheep skin and muslin to give your volume a handsome dress; but if mother wit is more plenty with you than the coin, and you have a Yankee's skill in the use of tools, do the binding yourself. A table, a bradawl, a darning needle, and a stout piece of twine, will furnish you for the work. Put your numbers in regular order upon the table or board, then, with your awl, make three holes, at suitable distances apart, and with the twine and needles make the numbers fast. If you wish a cover to the volume, put a coating of glue upon the back, and put over a stiff sheet of wrapping paper, and trim it off to the size of the book. Put the name of the work upon the back, and the No. of the volume, and your binding is finished.

You have now preserved your volume. No number, containing just the information or experiment you want, will be lent to your neighbor, or stray away into the miscellaneous pile of newspapers, and be hustled off into the garret by the good housewife, who loves so dearly to have everything packed away in its place. The next thing, after preserving the papers, is to use them. If an agricultural journal is worth reading at all, it is worth studying, until you thoroughly comprehend its teachings. If your paper is merely an appendage to an agricultural seed or tool store—a vehicle of puffing this man's potatoes or that man's plow—it would be better to change it for one that has no axe of its own to grind, but stands ready to do the needful by yours. There are practical scientific farmers, as well as seedsmen, in the editorial field, and there is a choice in papers, as well worthy of your attention as a choice of seeds or a choice of

stock. If the editor of your paper is accomplished in his profession, take him as a standard, and his teachings for your text-book, until you can find a better. Study your text-book, for it contains not only the news of your business, but its fundamental principles. There is a grammar of agriculture, which needs to be fastened in the memory, and inwardly digested. These principles are as essential to your success, as the principles of Blackstone and kindred text books are to the lawyer. The lawyer has also his reports and book of cases, with which it becomes him to be familiar. Your bound volumes contain your reports and record of cases. Many of the experiments therein recorded would be an improvement upon your present style of farming, if you would adopt them. They would give you larger crops with less expense, and show a great difference in the annual income of the farm. If the writer has derived any benefit from agricultural papers, it has been gained by studying their principles and following their teachings. If any one can grow corn, or any other farm crop, more economically than yourself, it is for your interest to learn the method and put it in practice. We say, then, preserve your papers and use them. They will beguile you of many a weary hour in stormy weather or in winter, and furnish you with material for reflection when your hands are busy.—*The Homestead.*

For the New England Farmer.

CHINESE SUGAR CANE.

SORGHUM SACCHARATUM.

MR. EDITOR:—Last spring I received from the Patent Office, through your hands, a paper of seed of the Chinese Sugar Cane, which I planted about the 20th of May, not believing it would amount to much. It came up well, and has grown well, having attained to the height of ten feet. Last week—the corn being just in bloom—I cut several stalks and crushed them and pressed out the juice, which I boiled down to molasses, a sample of which I send you, that you may both see and taste for yourself. The juice is very rich in saccharine matter, the quart of juice which I boiled making about half a pint of thick molasses. I did not know how to make sugar, and so did not see what it would do; nor have I made any champagne of it, though it is said to make a fine article. The great difficulty is to express the juice from the stalk, and nothing that I know of will do it effectually but a sugar mill, and those we do not have in these parts. But if this article proves, on a further trial, to be what I think it is, sugar mills may be erected even in the good old Bay State, and we be no longer dependent on slave labor for our supply of sugar and molasses. I hope it may be so, for then we shall give slavery a check, and perhaps Virginia will find the demand for slaves to go South on the sugar plantations considerably diminished, so as to render the breeding of slaves unprofitable for that State. Then again there will be some satisfaction in knowing that you are using sugar and molasses from cane grown on free soil by free labor. If this article should succeed perfectly we cannot sufficiently estimate the glorious results of its successful cultivation. It is a fine article for stover, it is so rich in saccharine matter; cows, pigs and even horses will eat the stalks as well as the leaves with the greatest avidity. The tops may be used for brooms, just

as broom corn is used. It is said that the juice when set with alum, dyes a beautiful red, but in this experiment I have not been successful. The seed when ripe is good for fattening hogs, fowls, &c. I believe it is to be a great article, second in importance to few things that the farmer can grow. It is very desirable that it should be more extensively raised another year, and careful experiments made with it so as to determine its comparative value as a field crop. If you desire I will send some stalks of the cane to your office.

JAMES H. HYDE.

Newton Centre, Sept. 22, 1856.

REMARKS.—Our own experiments with the growth of the Chinese Sugar Cane correspond with those of our correspondent. We can scarcely conceive of a more important acquisition to our products than that of some plant which will enable us to cultivate sugar orchards along side of our cranberry meadows, and apple orchards. We trust that others will make such experiments with the cane as will justify a more extended trial another year.

For the New England Farmer.

EDUCATION OF FARMERS.

"How much education for the farmer?" inquires a recent correspondent in the columns of the *New England Farmer*. Just as much as circumstances and opportunities will allow him to acquire; just as much as if he intended to be a minister, a doctor, or a lawyer. The prevalent notion, however, is, that if a farmer have six sons, and intends that the eldest shall be a farmer, the second a schoolmaster, the third a doctor, the fourth a lawyer, the fifth a minister, and the sixth a merchant—three of them, at least, those designed for the learned professions, must have a "liberal education," while the two that are designed for mercantile life and teaching, must each have what is called a *good English education*; the other, it matters little whether he go to school much or not, for he is to be a farmer. The chief thing for him is, that he should be athletic, apt, and willing to work with his hands; ready and skilful in dirt digging, as taught by the traditions of his ancestors, and by the same, to hate and despise all "book farming," as being speculative and theoretical hypotheses. It might be deemed pertinent here to start the inquiry why this son should be taught to hate *book farming*, and the others be taught to love *book preaching*, *book counselling*, *book diagnoses*, and the like? Are not law, medicine and theology as rife in speculative hypotheses as agriculture? Why not then be consistent, and either discard *book knowledge* in all cases, or else admit it in all, and so learn to discriminate between truth and error, between mere speculative theory and sound instruction, between hypotheses and true knowledge, as to avoid imposition, deception, impostors and charlatans, whether they appear as lecturers and teachers, or as authors of books, papers or periodicals?

The position taken by the writer, is, that it is no matter what vocation or profession you design your son for, give him the best, and highest, and most liberal intellectual culture in your power, and then he is ready to study and pursue successfully any

vocation or profession which interest or taste may lead him to choose and follow. There is really no vocation in which men can engage that demands a more liberal culture than agriculture. In this pursuit, the brightest genius may find ample scope to display and exert itself.

As the writer has often remarked, farming is the most complicated of all the arts. It is the art of arts. And alas, how little has been done to develop and confirm the rules of this art. Had the conductors of the farms over christendom been educated men, as well as practical, how different would have been the condition of the farmers to-day, compared with what it really is. Why, every farm, so to speak, is a laboratory; for a laboratory, says Webster, is "a place where work is performed, or any thing is prepared for use." The conductor of the farm work, whether he do the labor with his own hands, or employ others, is the master chemist of the field laboratory, and is "preparing something for use." One of his experiments, if it prove successful, will prepare wheat for bread; another will prepare corn, another oats, another barley, another buckwheat, another potatoes, and others, roots, bulbs, grass, hay, live stock, &c., &c. Now if it be admitted that it requires a liberal amount of culture for a man to go into a chemical laboratory, (a mere toy-shop compared with a farm, in results and everything else,) and work experiments successfully—and none will deny it—then how much more important is it, that the conductor of a farm should be a man of liberal culture, a man that knows how to combine elements, so as to make wheat, corn, roots, grass, &c., upon which man and beast are to subsist. The chemist in the laboratory makes his labor successful, as his audiences will bear record. So should the director of a farm; and so does the farm director in his laboratory, when under the influence of experience, observation and knowledge; a trio that should illuminate the path of every farmer. More anon, if you will allow, Messrs. Editors. L. W.

TO MAKE INK.—Seeing in your column "To Correspondents" your answer to a communication from C. C., of Ohio, I send you the enclosed circular, which I received from Detroit, in answer to a note "enclosing stamp." If C. C. wishes a good ink let him try this.

1. Take three ounces of best galls, and 1-4 of an ounce of cloves, bruise to a coarse powder, and boil over a slow fire in a pint of water for a few hours, stirring frequently; then set aside in a covered vessel till cold; then strain, and supply the place of the water lost by evaporation till it measures one pint.

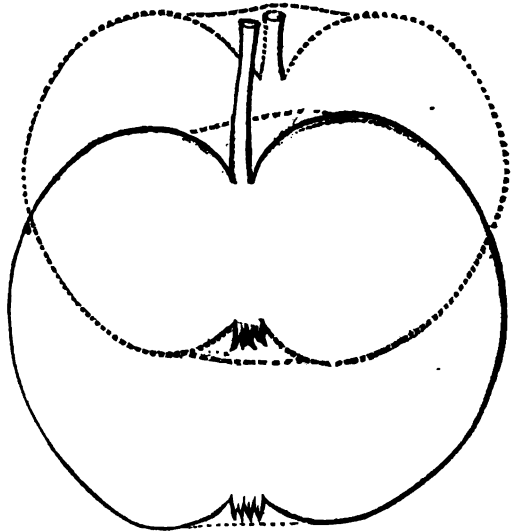
2. Now dissolve 1 ounce and 1 dram of best copperas in 1-2 pint of water and strain; then dissolve 5 drams of gum arabic in 1-2 pint of water, and add to the copperas solution and 1-2 pint of good cider vinegar. Now mix 1 and 2, and add 1 ounce of liquid blue. Use soft water. Let your ink be exposed to the air, and you will have a black ink.—*Scientific American*.

SEALING-WAX FOR FRUIT CANS.—A very good sealing-wax is made by melting and stirring well together, one ounce of Venice turpentine, four ounces of common resin, and six ounces of gum shellac. A beautiful red color may be given by adding one quarter of an ounce or less of Vermillion.

EARLY JOE AND MEXICO APPLES.

EARLY JOE. (*Dotted Outline.*) Small; flattish round; smooth, bright red on a pale yellow ground, covered with bloom; stalk short, slim, in a broad, deep cavity; calyx small, closed, in a shallow basin; flesh white, melting, and very tender, of a very fine, high aromatic flavor. One of the very best and most beautiful; but good only when eaten from the tree. During Sept. We find it to be only a moderate grower, and a great bearer. Origin, Bloomfield, N. Y.

MEXICO. Medial; roundish; bright crimson, clouded and striped with very dark red, a little yellow in the shade; few large light dots; stem rather long and stout, in a broad, rather shallow, russet cavity; calyx rather large, in a narrow basin; flesh whitish, tinged with red; tender, rather juicy, of a fine high flavor. We find it a moderate grower; perfectly hardy even in Maine. A good bearer, very handsome, excellent fruit. Sept. Origin, Canterbury, Ct.



HOW TO SECURE PEACE AT HOME.

It is just as possible to keep a calm house as a clean house, a cheerful house, an orderly house, as a furnished house, if the heads set themselves to do so. Where is the difficulty of consulting each other's weakness, as well as each other's wants; each other's tempers, as well as each other's health; each other's comfort, as well as each other's character? O! it is by leaving the peace at home to chance, instead of pursuing it by system, that so many homes are unhappy. It deserves notice, also, that almost any one can be courteous, and forbearing, and patient in a neighbor's house. If anything goes wrong, or be out of time, or disagreeable there, it is made the best of, not the worst; even efforts are made to excuse it, and to show that it is not felt; or, if felt, it is attributed to accident, not design; and this is not only easy, but natural, in the house of a friend. I will not, therefore, believe that what is so natural in the house of another is impossible at home; but maintain, without fear, that all the courtesies of social life may be upheld in domestic societies. A husband as willing to be pleased at home and as anxious to please as in his neighbor's house, and a wife as intent on making things comfortable every day to her family as on set days to her guests, could not fail to make their own home happy. Let us not evade the point of these remarks by recurring to the maxim about allowances for temper. It is worse than folly to refer to our temper, unless we could prove that we ever gained anything good by giving way to it. Fits of ill humor punish us quite as much, if not more, than those they are vented upon; and it actually requires more effort, and inflicts more pain to give them up, than would be required to avoid them.—*Phillip.*

THE USE OF CHLOROFORM UPON ANIMALS.—It being necessary, a few days ago, to perform an operation upon a favorite horse belonging to Rev. A.

W. Burnham, of Rindge, N. H., chloroform was given with complete success. The horse laid down quietly in a sound sleep, and did not wake till fifteen minutes after the operation was over, having apparently suffered not a particle of pain. This fact is made public for the benefit of those "righteous men" who are merciful to their beasts.

TO AUTUMN.

BY KEATS.

Season of mist and mellow mirthfulness,
Close bosom friend of the maturing sun;
Conspiring with him how to load and bless
With fruit and vines that round the thatcheaves run:
To bend with apples the mossed cottage trees,
And fill all fruit with ripeness to the core;
To swell the ground, and plump the hazel shells
With a sweet kernel; to set budding more,
And still more, later flowers for the bees,
Until they think warm days will never cease,
For Summer has o'er-brimmed their clammy cells.

Who hath not seen thee oft amid thy store?
Sometimes whoever seeks abroad may find
Thee sitting caseless on a granary floor,
Thy hair soft-lifted by the winnowing wind;
Or in a half-reaped furrow, sound asleep,
Drowsed with the fume of poppies, while thy hook
Sparcs the next swath and all its twined flowers;
And sometimes like a gleaner thou dost keep
Steady thy laden head across a brook;
Or by a cider press with patient look,
Thou watchest the last oozing hours by hours.

Where are the sons of Spring? Aye, where are they?
Think not of them—thou has thy music too,
While barred clouds bloom the soft dying day,
And touch the stubble plains with rosy hue;
Then in a wailful choir the small gnats mourn
Among the rivers shallow, borne aloft
Or sinking as the light wind lives or dies;
And full-grown lambs loud bleat from hilly bourn;
Hedge-crickets sing; and now with treble soft
The red-breast whistles from the garden-croft;
And gathering swallows twitter in the skies.

For the New England Farmer.

DEPARTURE OF THE SWALLOWS.

There is an old-fashioned barn upon the farm where I reside, which is the favorite resort of numerous swallows. As special provision has been made for their entrance into the barn, and as they are never disturbed in their domestic felicities, from seventy-five to a hundred young swallows are hatched and reared every year, beneath its friendly roof.

Towards the middle of August these swallows, old and young, began to hold conventions, (musical, not political,) in various localities about the premises. Sometimes they would gather upon the top of the barn, or house, or some of the out-buildings; sometimes upon the dead limb of a tree, or upon a fence, or the tops of the beautiful Indian corn. But wherever their place of meeting chanced to be, the air around was filled with their lively music.

On Sunday evening, August 24, just before dark, they held a grand "mass meeting," upon the top of the old barn, and since then, they have not been seen. They probably commenced their journey southward, early on Monday morning, August 25. Two pairs, with seven or eight young ones,—which, doubtless, had not, at the time, sufficient strength of wing for a "trip to the tropics,"—remained until September 3d, when they also departed for "the sunny South." So the swallows have again left us; and with them nearly all the feathered songsters which have cheered our hearts with their sweet music, during the long, bright, summer days.

Another summer, with its lovely flowers, its fresh green leaves, its myriads of gay insects, its dewy mornings and balmy evenings, has also departed. The voices of autumn can already be heard, and its scenes meet our gaze; the chirping of the cricket, the sound of the near or distant flail, the sighing of the wind through the fading, withering leaves, the ripening corn and fruit, the red, yellow, and purple tints upon the maples in the lonely swamp. Sad Autumn will soon glide away into the "unrelenting past," leaving stern winter, with its howling winds and drifting snows, in the undisputed possession of the once beautiful fields and groves.

Although we know that with another summer they will all return, yet we cannot suppress a feeling of sadness as we witness these successive departures of the fair and beautiful things of earth. But we need not feel sad, for if our hearts are true and brave, we shall find that every season has its charms; and we know that when the time comes for our departure, if obedient children of the Most High, we too, like the birds, shall pass to a more genial clime, but not like them, to return.

SWALLOWS BUILDING THEIR NESTS IN TREES.

During the present summer, a pair of swallows, with white breasts and black, shiny backs, built their nest in the dead limb of a tree which stands near my house. They took possession of a hole which was once occupied by the "chick-a-dees." They came somewhat later than the barn swallows, and departed much sooner. Their wing and tail feathers were rather shorter than those of the barn swallow, which made them appear smaller when flying. So far as I had an opportunity of observing, I could see no difference between the male and

female, either in size or color. Their notes were few and plaintive.

As I have no work on ornithology at hand just now, I should be obliged to Mr. Fowler, or Mr. Wetherell, or any one who knows, if they would say (if, from my description they are able thus to do) what class of swallows these birds belong to, and whether they usually build their nests in trees.

Groton, Sept. 6, 1856.

S. L. WHITE.

For the New England Farmer.

TOO MANY SHADE TREES.

BY HENRY F. FRENCH.

In some old school-book there is a story of one of the early settlers, whose wife and several small children were attacked by Indians, in their field a short distance from his log house. Hearing their cry, he mounted his horse, and rode to protect them, but, seeing the overwhelming number of the savages, he at first gave up the idea of a contest, in despair, and determined to snatch up the one of his family most dear to him, and escape to his well-fortified cabin.

He rode up to his little flock, who crowded around him for protection. And now, which should he select, and leave the rest to the merciless savages? He glanced at their pleading, upturned faces, and he could not choose. He resolved to die with them all together, and turning upon the cowardly foe, he attacked them with such fury, riding back and forth across their path, and threatening first one and then another, with his deadly rifle, that they were kept at bay, till his family all reached their home in safety.

We have looked forward from youth to a home of our own. We have planned and re-planned our house, and in our minds, again and again laid out our walks, and groves, and gardens. Presently, our wishes are realized, and we have, through much tribulation, it may be, much embarrassment of means, and the vexations and disappointments incident to all that is human, actually builded our house, and laid out our grounds, and to end at once and forever, the reign of barrenness which was over our land, when we bought it, we have planted small trees, and shrubs and hedges, and with the help of imagination to aid their growth, we see at length, our ideal become the actual. We knew at the outset, that sunlight is essential to health, that the distant, beautiful view of mountain, or river, or meadow, or waterfall, is worth more than gilded pictures of them that hang upon the parlor wall.—We knew that the grace and true grandeur of the noble forest tree, result from its breadth and fullness of outline, which it can attain only as man attains his true nobility, with freedom and space to develop the natural capacity for greatness. We admired the beautiful smooth lawn about our dwelling, and every spring, the grass seemed greener

than ever before; and we were thankful that this, at least, was born like Pallas, in fullest beauty, and asked no waiting for to exhibit perfection.

All things prospered under our hands. The trees grew while we were sleeping. Year after year, they awakened in the spring time, and stretched out their hands towards each other, nearer and nearer. Shooting upwards, they have spread a curtain across the sunlight, and while watching the little birds in their nests on the branches, we have almost forgotten the life-giving sunshine, and the glowing pictures which lie behind them.

The lawn, at length, is crowded with shrubs and vines. The trees are striving upward for light, with long and naked stems. The hemlock and the larch have but dry sticks in place of their graceful lower branches. The pine is thinking of utility, and trying to become a mast. The hedge is dying of sheer mortification, that every other tree should tower above it, and the beautiful green grass, our first and early love, no longer cherished with the dew and sunlight shed upon it, has well nigh perished.

What shall we do? We are sure we cannot save all, but like our pioneer in the story, we cannot decide which shall perish, and usually, we remain undecided, and a worse than pristine wilderness shrouds our dwelling. In the older villages of New England, we as often see the want of thinning out as the want of planting; and the task of destroying is far more difficult and more delicate than that of creating. We see that our grounds are crowded, and yearly becoming more tangled, and disorderly. We cannot help suspecting that comfort and health, even, are affected by the dampness of too much shade; but where shall we apply the destroying axe?

This tree was the gift of a friend who is far away; another was brought from the woods with the help of a brother, and together we placed it where it is growing. That vine reminds us of one whose memory is sacred, for it was her favorite flower; and this shrub came from the old homestead, and so has a peculiar value. Then there are the noble elms and maples, too noble to be ruthlessly slain; and so, though we appreciate the necessity of the sacrifice, our hands almost refuse the office of the high priest.

Great reverence is due to the objects of any man's affection, be they human, or no more than inanimate. Love makes all things sacred. The very idols of the pagan should not be profaned, or treated with disrespect, even, could we not offer him a more worthy object of adoration. Often as we travel through the older portions of the Northern States, we see some old farm-house and its surroundings, an object almost of disgust, from its neglected and dilapidated condition. The house is unpainted and black; the glass is small, and the

old chimney in the middle of the dwelling is almost falling down. Old sheds, and a well-house, and the other outbuildings, are in ruins. Little irregular enclosures divide the farm, especially near the buildings, into ill shaped yards, and the old stone walls are crooked and covered with moss.

In that old house, you may be sure there lives an *old man*, and those things so forbidding to us, are his idols. He, in the days of his strength, built the house, and according to the light he had, arranged his home. Here were his barns for his cattle, his places for his swine and poultry, his calves and his colts, and while his wife was spared, and his boys were at home, all was kept in order. But the lights of his house, one by one, have gone out, and alone he bides his time. His memory is his vision. He sees by the "light of other days," and will hear of no change, no innovation upon the home of his youth and manhood. Let his monuments of buried hopes and vanished pleasures be sacred.

Soon we may pass that way again, and thoughtlessly we exclaim, what an improvement has been made. The old house has been re-created. New doors and larger windows, porticos and verandahs, with paint or stucco, have transformed the old mansion to a modern villa. The old walls are torn down, the little yards have vanished with the little decayed sheds which they surrounded, and modern taste has profited by the work of near a century, and brought the fine old oaks and elms into centres of beautiful lawns. The old man has died, and his home has been sold, and now, while we bless the new beauty that comes over his old home, let us drop a tear over his idols that are thus pitilessly broken. The new is not so sacred as the old.

Still, the work of thinning out must sometimes be done. Often, we live on from year to year, and the vegetation around us changes imperceptibly to us, and we vainly imagine that the grace and beauty which we sought so carefully, and for which we grouped our trees, and arranged our walks, has been attained, when, to a stranger's eye, our dwelling is surrounded by a thicket as uninviting as an alder swamp.

The man who can live and not grow old,—and there are some such—who can continue to cultivate his taste, can sympathize with the young, and not forget the aged, who can appreciate new beauty, and still revere the old, may satisfy the demands of public taste, while he preserves about his home all that with him constitutes its identity.—A rural home, even of ten year's growth, requires often as much cutting away as transplanting. Great improvement may at once be made in this way by a judicious hand, without desecration.

We have labored hard to induce men to plant trees, and have no regrets for such teachings. The bare suggestion that there is an extreme opposite

to that of "the bare and the bald," will, in many cases, be sufficient to correct the evil of too much shade about our dwellings.

HORTICULTURAL SONG.

BY EPES SARGENT.

The Winter chill has pleasure still,
And Spring is fair to see ;
In Summer's heat the groves are sweet,
But Autumn bold for me !
With vine-leaves on his honest brow,
And harvest in his arms,
He comes, with all of Winter's cheer,
And all of summer's charms !

The Flowers and Fruit that deck our board,
To Woman tribute owe ;
From her the Rose steals all its bloom,
From her, the Peach its glow ;
The Lily, in her purity,
May see its own eclipse ;
And where did Cherries take their red,
If not from woman's lips ?

The purple bloom upon the Grape,
The Violet's modest hue—
Who does not see they're borrowed, both,
From certain eyes of blue ?
And if the Orange Flower is sweet,
And the Hyacinth is fair,
Will any one their lovely tints,
With those we sing compare ?

And there be men of high renown,
Who're welcome here to-day,
In Church and State who've garlands won,
That will not fade away ;
And tillers of the soil have come
To grace our festival ;
And Horticulture's peaceful chiefs—
And they are welcome all !

Then while we show our garden's wealth,
And boast our Plums and Pears,
And while we welcome to our hall
Our Governors and Mayors,
Let's not forget, of all the charms
That grace our board, the crown—
But eat a lusty pipplin each,
To Mother Eve's renown !

For the New England Farmer

SEEDS—TIME TO ATTEND TO.

MR. EDITOR :—Now is the time to attend to this business in good earnest ; do not let the proper time pass away. I take it for granted, that you were thoughtful in this respect in the spring—and properly attended to such roots, &c., as were necessary to give you seed for another season. This going to the stores and seed shops every spring for seeds, and often getting an inferior kind, frequently a worthless article, and paying from two to five hundred per cent. above the cost of production, besides the risk of disappointment, is rather a too expensive business.

By selecting seeds from your own vegetables, you know what you get and what may be expected from them. With me, I derive four-fold more pleasure in planting my own seeds than those I buy, and I have no doubt you will find it so. Who does not feel a double pleasure in a tree of his own planting, than in that planted by stranger hands ? In the one case it is a child of our own, and in the other a child by

adoption ; true in the latter we may love it, take good care of it, and all that, interest dictates this—but after all, the real genuine affection is wanting. It is a well-known and settled fact that some seeds of the same species ripen sooner than others, and herein is involved a very important principle in their selection. Particularly is this the case in those crops which it is important should ripen before our early frosts come. Now by going through your field of corn you will observe that very many of the ears are some days in advance of others, perhaps a week. My advice is—mark those ears for seed, and generally these ears will be among the fairest in the field. I do not pretend to say, that by planting those seeds, another year they will come to maturity a week earlier, but that if you will follow this course for a series of years, you will get a variety of the same species of corn that will ripen a week or more earlier than it does now, and what an important acquisition this would be. The same thing holds true in regard to other crops, so that by a judicious selection of the seed you may have an early and late kind of the same species. Is not this principle in accordance with the operations of Nature ? It has been said that a farmer should never buy what he can possibly produce on his own farm, and this is sound doctrine. The most fore-handed and prosperous farmers I know of, are those who act upon the above principle ; they have "everything" to sell, and buy but little. They are the men who plant their own trees, raise their own seeds, as well as pigs, and take the *New England Farmer* and pay for it.

NORFOLK.

September, 1856.

NORTH MIDDLESEX CATTLE SHOW

Came off on the 16th. The day was fine, the arrangements were well made, and well carried out. We didn't see the plowing match, which was said to be well contested. There were many fine specimens of blood and grade stock, showing that much attention is being paid to the introduction of fine stock in this part of the county. The swine were of the finest description, and there were a number of promising colts. But the greatest attraction was in the hall, where a grand display of vegetables and fruit was presented. The peaches and pears especially were in great variety and perfection. An interesting address was given by Rev. Mr. FOSTER, of Lowell ; a good dinner was served up in a tent, at which the President, Mr. SPENCER, presided with his accustomed urbanity and ease. Good speeches and sentiments in abundance followed the dinner. Among the speakers were Mr. Sheriff Keyes, Rev. Mr. Foster, Hon. T. Wentworth, His Honor Ex-Lieut. Gov. Huntington, Dea. Otis Adams, of Chelmsford, and others. The whole affair was a very pleasant one, and highly satisfactory to all concerned.

A PRETTY PROCESS.—Among the machines lately on exhibition at the agricultural exposition in Paris, was one for hulling wheat. It is said that by the methods now in use, the bran, when it is separated from the wheat, carries away with it at

least twenty per cent. of nutritive matter. The new process reduces this amount to four per cent. The hulled grains of wheat, seen through a microscope, present a perfectly smooth and polished appearance, something like that of potatoes when the skin has been removed by washing. The bran itself is but a pellicle, of which excellent paper is now made. The inventor of the machine, M. Besnire de la Pontonaire, affirms that if this process had been applied to the grain consumed in France the past year, the crops, instead of presenting a deficit of seven million hectolitres, would have shown a surplus of three million hectolitres. (The hectolitre is a fraction over two and one-half bushels.) The cost of hulling a hectolitre of wheat by the new process is about four cents.

For the New England Farmer.

EFFECTS OF PUMPKIN SEEDS ON COWS.

MR. EDITOR:—I noticed a statement in a late number of the *Farmer*, to the effect that pumpkin seeds dried up a cow's milk. This was something new to me, and contrary to the idea that I had always entertained, to wit, that pumpkins were valuable to feed to milch cows, therefore I resolved to ascertain the real value of that statement before taking any stock therein. Being unsuccessful in raising a crop of pumpkins myself, the past season, I procured a few loads of one of my neighbors, who had a surplus, and commenced feeding them out to my cow, at the rate of half a bushel per day; she was then giving about eight quarts of milk per day, but instead of this increasing the quantity, they diminished it. I increased the feed to a bushel per day; still there was a decrease in the quantity of milk until the pumpkins froze up, when she did not give but four quarts per day. The cow did not fatten, and the reason for the decrease in the quantity of milk, I could in no way account for. When I stopped feeding the pumpkins, I gave a pail-full of slops from the house, with two quarts of oat meal per day, and in a short time, she was giving her former quantity; still I did not think of the pumpkins doing the mischief. When I read the statement in your paper, I had commenced feeding boiled to the cow, in addition to the slops and meal, with the same effect on the milk as in the fall. I then took out all the seeds before boiling, when, lo, the change! Instead of five quarts of milk per day, I got nearly nine in a short time. I again kept in the seeds, with precisely the same result as before.

Now this experiment establishes a fact, which, (to me at least,) is of importance. Probably there are some who knew the same thing, years ago; and, perhaps, there are others, some that, like myself, were not *posted*, to whom this will be of consequence. I also noticed while I left out the seeds, that the cow made no extra quantity of urine, which all cattle invariably do, when fed on pumpkins, seeds and all. If you see fit to give this an insertion, it may be of benefit to some who have had no more experience than myself.

Yours, &c., J. B. FREEMAN.

Lebanon, N. H., 1856.

 The total export of treasure from San Francisco, for the last seven months, was thirty million.

LEOMINSTER CATTLE SHOW.

On the 23d inst. the Farmer's Club of the good old town of Leominster had its annual exhibition. The day was lowery, and in the afternoon there was a good deal of rain, but the public spirit of the people surmounted all the discouragement arising from the state of the weather. They were determined to have a good time, and they did. They were punctual in carrying out all their arrangements, and there was a general turn out of all ages and sexes. The show of stock and swine was good, and highly creditable to the town. There were some fine pigs, a cross between the Suffolks and Mackays, that promises well.

The show in the Hall was surpassingly fine, and commanded the unqualified admiration of all who witnessed it. Magnificent apples, pears, peaches and grapes were piled upon four long tables in almost unlimited variety, and in quality equal to any thing to be found in any part of the State. The show of fruit raised in this town alone, would have done credit to any county exhibition in New England. Indeed, we have been present at more than one State show where the exhibition would not compare with this, either in quality or quantity. There were Crawford peaches, weighing 10 ounces. Isabellas, Dianas, Sweet-water, Black Hamburgs and fine native grapes were here in abundance. Mr. Hall's Black Hamburgs were magnificent. Among the largest contributors were C. C. Field, the President, Isaac Smith, Mrs. E. Robbins, W. Gates, I. Whitecomb, L. Heustis, L. Burrage, N. Harlow, I. C. Adams, L. Buss, G. P. Gibson, C. Boyden, D. Maynard, Jona. Colburn, George Smith, Oliver Hall and E. Buss. There were others, perhaps, equally deserving, whose names we did not get. The exhibition of combs, pianos, needle-work, shell-work, hair-work, and other works of art and taste, was of a high order. The show of butter, cheese and bread spoke volumes for the housewifery of the Leominster ladies. There were in close contiguity with the bread, some splendid samples of honey, reminding us of the days of our boyhood when we used, once a year, upon the taking up of the honey, to have a feast upon brown bread and honey. There were some samples of coffee wheat, a variety of much promise, and specimens of white rye—and one of flour from white rye—equal in whiteness to wheat flour. This new variety of rye we would commend to the notice of New England farmers, generally.

A large quantity of vegetables in one corner of the hall attracted much attention.

At 12 o'clock an address was given by Dr. REYNOLDS, of Concord. The address was of a highly practical character, and was listened to with close attention. At the close of the address a procession was formed and proceeded to the hotel and

sat down to an excellent dinner. The tables were well filled, and after the wants of the body were satisfied, "the feast of reason" commenced, and an hour was spent in a very pleasant manner. We think there is no other town in the county of Worcester, with the exception of the city of Worcester, that can get up so fine an exhibition of fruits.

EXTRACTS AND REPLIES.

BRINE AND ONION SEED.

Having just been into my garden, I found my onions were bottoming finely. For some ten years past, insects have almost entirely prevented raising onions, so much so, that but few in this section have tried it at all. I was speaking, last spring, with one of my neighbors, about raising onions. He said there would be no trouble about the insect, if I would soak the seed in salt water, but he had forgotten the quantity, so I guessed at it. I made a tea-cup two-thirds full of brine, as strong as could be made by pouring hot water to salt, which I let cool, and then put a paper of seed in it, which remained until the next morning. On examining it in the morning, a small white maggot was plainly to be seen in the brine; the brine was poured off, and ashes added to the seed, so I could sow it. The seed came up as well as any I ever saw, and have grown undisturbed by insects.

West Windsor, Vt., 1856. * * *

HOW SHALL I PROTECT GRAPE VINES?

I have a grape vine which has grown from the root ten feet since the first of July last; it is now very green, and like a sprout in June, and it has occurred to me that if left unprotected, the winter might be too severe for it. I am desirous of preserving it, and wish to know the best plan for doing so. If you will inform me of the best one to adopt, I shall be greatly obliged.

Boston, Sept., 1856. A SUBSCRIBER.

REMARKS.—Lay it upon the ground and throw leaves, coarse weeds, hay or brush of any kind over it. It ought not to be compactly covered.

ON HARVESTING CORN.

I have been trying the different methods for a number of years, to satisfy myself which is best.—I have tried breaking the corn off, and cutting up the butts, (for the slovenly practice of leaving the butts in the field, I cannot put up with,) and cutting the butts and corn together; and I have tried cutting all together, and shocking it in the field, which I think is decidedly the best way.

Gloucester, Sept., 1856. T. H.

AN EXPLANATION.

MR. EDITOR :—I notice in your account of the Vermont State Fair, a statement that \$20,000 was offered for the famous Ethan Allen horse, and refused. Permit me to state the facts: \$20,000 was offered for the horse, by Mr. Austin, of Orwell, one of the owners of the horse; but there was no one, not interested, ready to purchase at quite so high a price. By publishing the above, you will oblige one, and I think, many who are much op-

posed to the gambling, horse-racing tendency to which our fairs seem tending, and who think it much better to improve the morals of man, than the speed of the horse.

Z. WHITE.

Middlebury, Vt., 1856.

PRICES CURRENT.

MR. EDITOR :—The *Monthly Farmer* comes to hand in good form, and I am much pleased with its contents. But there is one thing missing, that is the market price of all the field and garden products that it teaches us to raise. As it is in the weekly, would it not be a good plan to insert a list in the monthly? Then we can judge of the value of these things. Some of your subscribers raise more than they want for themselves.

Williamstown, 1856.

A SUBSCRIBER.

REMARKS.—We are occasionally asked why we publish no prices current in the *Monthly Farmer*. The reason is that the matter for the Monthly is in the printer's hands some weeks before it is issued, and the delays occasioned by printing, folding, &c., are so great that subscribers do not receive their papers until a fortnight after the copy is prepared. Of course we could give nothing like an accurate statement of prices, and any other is useless.

FINE PEACHES.

DEAR SIR :—Something was said in a former letter about my furnishing you with a *practical* article. I send you one now, the product of my hands, if not my head. Please accept it from

Truly yours, S. H. HILDRETH.

Westford, Sept., 1856.

REMARKS.—This year, friend Hildreth, such a practical illustration of "bestowing your goods" comes home to men's "bosoms," at any rate. The box was received in good order, and its "contents noticed" with unusual satisfaction.

ELDER BERRY WINE.

I would inquire through you, or your excellent paper, of the best method of making *elder berry wine*?

A SUBSCRIBER.

Dover, N. H., Sept., 1856.

REMARKS.—To one quart of elderberry juice, add two quarts of water and three pounds of sugar—the better the sugar, the better will be the wine. As soon as it is done fermenting, strain it, and put it in vessels that are perfectly clean. It will improve by age.

BUGS IN PEAS—TRIMMING PEAR TREES—BORERS.

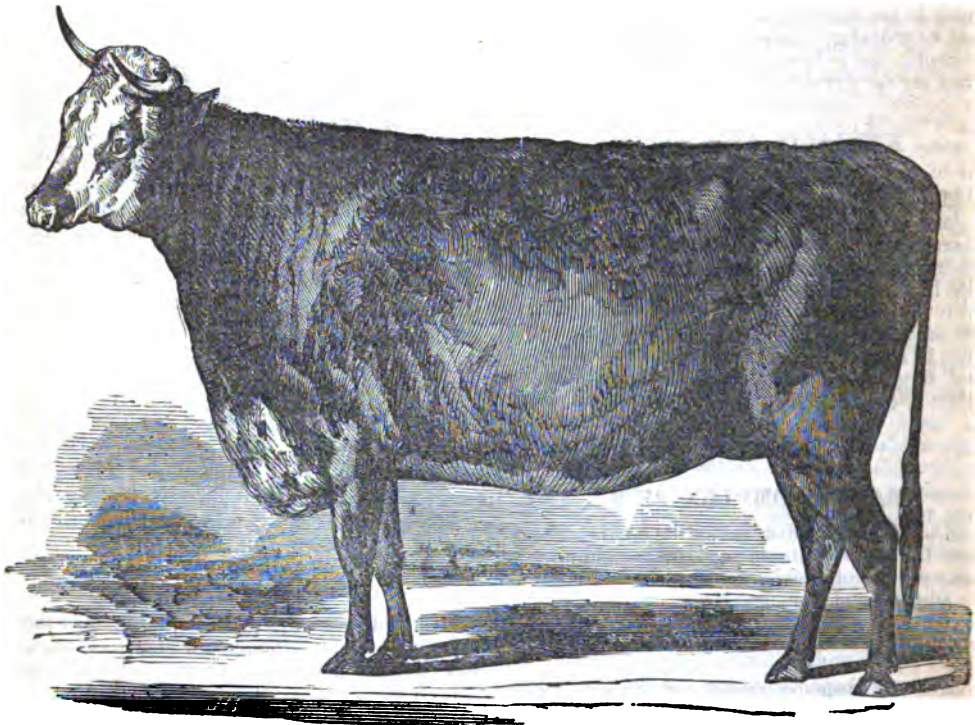
What can be done to seed peas to prevent the bugs from eating holes in them?

Will it do to trim a young pear tree at this season of the year, and how much take off?

How can borers be prevented from getting in trees, and how killed after they are in? Is there any wash that will destroy the egg before it is hatched? if so, what is it, when and how applied? How proceed with the wound after they are out?

Orange, August, 1856.

A SUBSCRIBER.



A HEREFORD HEIFER.

There is a considerable portion of the business of the farmer as much unlike the mere cultivation of the soil, as that of the mechanic, or any of the professions. He ought to understand keeping accounts, and purchasing and selling, for of the last two he has a good deal to do. His business is partly mercantile. The farmers, in any of our country towns, buy and sell to many times the amount of the store-keepers each year, and it becomes them as much to understand, thoroughly, the articles in which they deal, as for the store-keeper to be well acquainted with the cloths and silks, and sugars and other goods which he purchases.

It is with this view that we sometimes give illustrations of animals or implements, that have not been thoroughly tested, and are not well known and established.

Every farmer should know something of all the breeds of cattle that have been introduced into this country, so much, at least, as to be able to detect a *leading blood* in any animal that is placed before him. Then, when he learns the growing, fattening and other productive qualities of each, he is in possession of enough of that mercantile knowledge of

which we have spoken, to enable him to trade advantageously in any of them.

The Heifer, pictured above, is the property of CHARLES B. CLARK, Esq., of Concord, Mass., and took the second prize at the U. S. Cattle Show at Boston last autumn. Below we give the opinions of some distinguished breeders.

The Hereford oxen are considerably larger than the North Devons. They are usually of a darker red; some of them are brown, and even yellow, and a few are brindled; but they are principally distinguished by their white faces, throats, and bellies. In a few, the white extends to the shoulders. The old Herefords were brown or red-brown, with not a spot of white about them. It is only within the last fifty or sixty years that it has been the fashion to breed for white faces. Whatever may be thought of the change of color, the present breed is certainly far superior to the old one. The hide is considerably thicker than that of the Devon, and the beasts are more hardy. Compared with the Devons, they are shorter in the leg, and also in the carcass; higher, and broader, and heavier in the chine; rounder and wider across the hips, and better covered with fat; the thigh fuller and more muscular, and the shoulders larger and coarser.

They are not now much used for husbandry,

though their form adapts them for the heavier work; and they have all the honesty and docility of the Devon ox, and greater strength, if not his activity. The Herefordshire ox fattens speedily at a very early age, and it is therefore more advantageous to the farmer, and perhaps to the country, that he should go to market at three years old, than be kept longer to be employed as a beast of draught. They are far worse milkers than Devons. This is so generally acknowledged, that while there are many dairies of Devon cows in various parts of the country, (none of which, however, are very profitable to their owners,) a dairy of Herefords is rarely to be found.

To compensate for this, they are even more kindly feeders than the Devons, and will live and grow fat where a Devon would scarcely live. Their beef may be objected to by some, as being occasionally a little too large in the bone, and the forequarters being coarse and heavy; but the meat of the best pieces is often very fine-grained and beautifully marbled. There are few cattle more prized in the market than the genuine Herefords.

For the New England Farmer.

MAN, A COMPLEX BEING.

MR. EDITOR:—Man is a complex being, endowed with various faculties, passions, and desires, and each one of these organs needs its appropriate stimulus and training. He was not created and placed upon this earth, simply for the purpose of satisfying his animal wants and desires; he has a nobler and more heaven-born mission to fulfil; and even if an education should not aid him in the least in getting money, I should still consider it to be his duty and privilege to obtain all the learning which his means and opportunities would allow. I do not consider that the study of the dead languages is of importance to the farmer or laborer of any class. It is a relic of ancient barbarism, which has descended to us through many centuries, like an heir-loom, and entailed upon us by colleges and universities, that the study of the dead languages is the base and apex, the foundation and lapstone of all education. But that day has passed. Men have discovered that the highest attainments in science may be made without ever looking at a Greek grammar. In fact, it may be questioned whether the study of Latin and Greek is good for anything, excepting to some professional men. It has, in many cases, done more harm than good, by diverting the mind from the sublime truths of science and nature, and causing the mind to worry itself by studying out Greek roots. Yet in the study of mathematics there is a vast fund of practical knowledge, with which it is of importance that every farmer should be acquainted. Surveying, chemistry, geology, and botany, together with several other studies, open an extensive field of investigation and research, involving many principles of the utmost utility, besides disciplining the mind, and affording the utmost pleasure to the investigator.

And again I would say, that I consider it to be of the utmost importance that the farmer should be well educated; for in this country, where the people are sovereign, and where every man of good moral character is liable to be called upon to fill some station of honor or trust, I regard it of great importance that all should be prepared to oc-

cupy any place in government to which he may be called. Perhaps it is a somewhat common belief among the great mass of people, that the laboring classes cannot study, that the almost constant toil of the body to which they are subjected unnerves the mind, and incapacitates them for mental labor; but the idea is erroneous, for, although severe and unrelaxing toil does impair the mind, simply because the too severe taxation of any part of the system must of necessity, weaken the whole, and the mind is impaired, because it is not allowed free and sufficient scope for the exercise of its faculties, which unexercised, will weaken it to the same degree that overexercise would; yet, manual labor, when practised in a proper manner, and to a suitable degree, is most eminently qualified to develop and strengthen the intellectual faculties. In fact, they can never be unfolded without suitable bodily labor. EULER NORCROSS.

South Hadley, 1856.

REMARKS.—We do not entirely agree with our respected correspondent, when he says that the study of the dead languages is only a relic of barbarism. We confess that it would not be best for the man who is inevitably doomed to push the fore-plane, and do nothing else, to spend years in acquiring a knowledge of the Latin or Greek. But no such case occurs with us. The carpenter and the farmer will read, and the better they understand the meaning of the words they read, the greater will be the gratification they feel, and a greater positive benefit will they derive from that reading. Words grow from things and facts, called "roots," and when we understand what these are, we are in possession of the whole force and meaning of them. The study of these languages, also, exercises and disciplines the mind, as well as the other branches he recommends. We do not mean to say that the study of these languages is of the first importance, but that all may derive considerable benefit and gratification from even a partial knowledge of them.

For the New England Farmer.

HOW TO PICKLE CUCUMBERS.

I saw in your paper a week or two since, an inquiry as to the best mode of pickling cucumbers. I have used the following for several years, and think it the best of recipes:

Make a brine by putting one pint of rock salt into a pail of boiling water, and pour it over the cucumbers, cover tight, to keep in the steam, and let them remain all night and part of a day; make a second brine as above, and let them remain in it the same length of time; then scald and skim the brine, as it will answer for the third brine, and let them remain in it as above; then rinse and wipe them dry, and add boiling hot vinegar, throw in a lump of alum as large as an oilnut to every pail of pickles, and you will have a fine, hard, and green pickle. Add spices, if you like, and keep the pickles under the vinegar. A brick on the top of the cover which keeps the pickles under has a tendency to collect the scum to itself, which may arise.

Andover, Mass., Sept., 1856.

C. E. L.

AGRICULTURAL SHOW AT WORCESTER.

September 24, 25 and 26, at Worcester, were devoted to the annual cattle show. Most of the usual exhibitions were made, and in addition, there was a competition in dairy productions for premiums offered by the State Society, amounting to \$2,290. These ranged from \$250 down to \$25. Of course, these brought out a large number of bulls and milch cows, and probably brought together a finer show of dairy stock than has ever been seen together before. The Durham bull, Kirk Leavinton, owned by PAOLI LATHROP, Esq., of South Hadley, was probably the best animal of that blood that has been in this part of the State. The following is the award of the State premiums:

Dairy Stock—Class 1—For best six Dairy Cows, owned and kept together, 1st premium Samuel Ellsworth Barre, \$250; 2d, to Asa G. Sheldon, Wilmington, \$200; 3d, to Wm. Robinson, Jr., Barre, \$150; 4th, not awarded.

Class 2—For best four Dairy Cows, owned and kept from July to day of Show, 1st premium to Amos S. Knight, West Boylston, \$150; 2d to Wm. J. Robinson, Barre, \$100; 3d, not awarded.

Gratuity to Mr. John Mann of Worcester of \$25.

Class 3 and 6—Devon stock—no cows offered for premiums; W. Buckminster of Framingham, had a fine lot on exhibition, which the Committee commended very highly; the first premium on Devon bulls was awarded to Harvey Dodge of Sutton, \$50; 2d to John Brooks of Princeton, \$40; 3d to Peter Harwood of Barre, \$30.

Class 4 and 6—Durham stock. No cows offered; of bulls only one pure blood, "Kirk Leavinton," owned by Mr. Lathrop of So. Hadley took the premium of \$50. Gratuities were recommended to E. R. Brigham and S. Brigham of Southboro'.

Class 3—Ayrshires—There were nine entries of bulls. 1st premium to W. S. Lincoln, \$50; 2d, to J. Brooks, \$40; 3d, to W. S. Lincoln, \$25.

Class 4—Native Cows—two entries. Wm. Watson of Princeton, and Wm. Eames of Worcester, but neither complied with the regulations, and gratuities were recommended of \$30 and \$20 to these two gentlemen.

Class 5—Only one entry, and the premium was awarded to Rufus Carter, \$40, and a gratuity was recommended to E. R. Brigham of Marlboro'.

Class 3 and 6—Jersey and Alderney stock; 1st premium, best bull, to Wm. Spencer of Lowell, \$50; 2d, to Stephen Salisbury of Worcester, \$40; 3d, to Joseph Burnett of Southboro', \$35. No competition on cows in this class.

Class 6—Native and mixed—entries sixteen: 1st Moses Thompson of New Braintree, best bull, \$50; 2d, to Daniel Dwight of Dudley, \$40; 3d, to Francis Carroll of Grafton, \$25.

Mowing Machines.—This Society offered a premium of \$1000 for the best mowing machine, competition being invited from all parts of the country; the principal trial was had at Northfield in this State some weeks since, there being seventeen entries, and seven being present. The Committee awarded the premium of \$1000 to D. C. Henderson of Chicago, for the best machine and the best mowing of 50 acres in the best manner.

Aside from the stock presented, we consider the last exhibition of the Worcester County Society a

failure; that is, it did not meet the expectations of the people. Worcester county is capable of making a show in all the departments of agriculture that shall command the attention and admiration of all—in horses, oxen, cows, young cattle, swine and poultry; in implements and machines, in butter and cheese, in grains, vegetables and fruits. At the late show she did herself credit in two departments only,—those of cattle and horses. In some, the grand essentials to success were completely wanting. In vain did we wander through the resounding rooms of their commodious building to find the fruit department, in vain for the vegetables, and with no better success for the butter and the cheese. Where were the evidences of the industry and skill in domestic manufactures, or what evidences were to be seen that the farmers of Worcester county had any wives and daughters!

We are aware it may be said that a neighboring horticultural society, like the lean kine, had swallowed up the fruits and flowers and vegetables.—But was it in the contract with those in the association, that they should be compelled to go far off to see the productions of the county in this department of her industry, and then at an expense which they might not feel willing to incur?

There was room enough in the great hall, and there were products enough in the county to fill it, and there throngs of people came and went for hours, and wondered where the butter and cheese and bread, and vegetables, and grains and fruits, all were! It was Hamlet, the Prince of Denmark, with Hamlet omitted. It was not the good old Worcester county cattle show of former years.—There were not one-fourth of the people present on the second day of the show that there should have been—not half as many, we should judge, as were present at the town show in Groton the next day. The last day, we understand, when the horses were introduced, the assemblage of people was very large. Indeed, wherever a tract is laid on our show grounds, and horses are exhibited and trotted, we find them overshadowing every thing else, and gradually changing the whole affair from its original purposes. Great dissatisfaction has already grown up in consequence of this, and it is rapidly increasing. Many persons not only stay away themselves from the entire exhibition, but will not allow any under their guardianship to visit them.

We have no sickly sensibilities about these matters, and appreciate a good horse and know his value, as well as any man; and we also mingle with the people of the State so as to know their sentiments on this subject, as well as any man; and we tell our friends, now, that unless they return to the old practice of exhibiting *all the products of the farm* in their proper places, and allowing no department to overshadow the rest, the usefulness of our happy festivals is at an end.

We make no apology for expressing these views in connection with any society, for it is a duty, though it may not be a pleasure, to express our opinions of these matters in a plain and candid manner.

AGRICULTURAL EXHIBITIONS.

We are in the midst of the season for agricultural exhibitions. They are held in great numbers all over New England, and will continue to be held until the second week in November. If the increase of cattle fairs, and the increased attention and interest which is paid to them, is any indication of growth, no interest of the country has so progressed within the last quarter of a century as agriculture. It is but a comparatively short time ago, when the only cattle shows in the State were at Brighton and Pittsfield. Now they are not only held in every county, but in some counties there are three or four flourishing societies, while many towns hold fairs upon their own hook.

This is certainly an encouraging state of things. Our Commonwealth, rich in everything but a good soil, have determined by perseverance, intelligent culture and legislative bounty to overcome narrow and unwilling fields, and to draw from them the sources of food and nourishment, of luxury and beauty, in their fullest measure. As an incentive to efforts in this direction and an encouragement to the citizens to form Agricultural Societies for mutual improvement in the "art of Husbandry," the State allows and pays out of the Treasury \$200 for every \$1,000 contributed by individuals and put out at interest on public or private security; no society, however, to receive more than \$600 in any one year.

This liberal provision extends only to county societies. It follows, then, that minor societies associate for the promotion of the cause, solely from their love for it, sustaining themselves by their own funds, without any hope or expectation of receiving aid from any other quarter. Yet we can see that societies for sections of counties have flourished and are flourishing, quite as vigorously which as those which are sustained, in part, by the bounty of the State.

It is certainly a source of gratification and pride that our farmers have been enabled to realize so much from the comparatively small number of acres which they cultivate. To obtain a realizing idea of the large quantities and amounts of fruits, vegetables and field crops that are drawn from a few hundred thousand acres, it is only necessary to consult the "Statistics of Massachusetts Industry and Production," published by order of the Legislature. What other 7000 square miles of territory, what other one million of people on the face of the whole earth, have produced or can produce \$296,000,000 as the result of a year's industry? "This result, surprising as it seems," remarks the Secretary of State, falls, manifestly, below the reality."

The Agricultural Societies of the Commonwealth have contributed largely in this good work, and they will contribute still more to the development of our agricultural resources. In this point of view they deserve every encouragement it is possible to extend to them. Several exhibitions take place this week. We shall give attention to as many of them as we can reach, and publish reports of them.

—*Boston Herald.*

For the New England Farmer.

SINGULAR FACTS ABOUT POULTRY.

DEAR SIR:—A most singular occurrence has taken place among my poultry, which I thought might be of some interest to you. A fall chicken perfectly black, commenced laying in April last, and laid eighteen eggs; she then wanted to set, but as she was a young bird, I shut her up for a week or two, and then let her loose. In a few days she again commenced laying, and laid as many eggs as before; and as before, wanted to set. I shut her up for ten days, then she was let out again. Soon after her neck became covered with gold colored feathers, while those on the rest of her body were a bright beautiful purple, brighter than any of the cock's. Her head and legs remained as before, excepting the spurs, which were longer. In October she shed her feathers, and put forth beautiful, brilliant ones with those in the tail longer and brighter than any cock's, her head and legs remain the same. She takes but little notice of any of the hens, and the cocks do not notice her. She has laid no eggs since her feathers changed. Last week I set some hens near each other, and to my great surprise, this hen has taken it upon herself to be their nurse; she sits in front of them all day, and has pecked off the feathers from her breast to lin their nests.

S. A. SHURTLEFF.

Brookline, April 12, 1856.

Sept. 2.—Since the above was written the above-named hen has laid four litters of eggs, in all about 80, and wanted to set four times, and is now laying again. I let her set in May on 13 good eggs, but she did not bring out a single chick, and the other hens that were set at the same time brought a full brood. Why she did not is to me a mystery. She is in perfect health, and her plumage is most brilliant, with all feathers like the male bird, changed from black to a rich golden and purple. S. A. S.

For the New England Farmer.

MANURE AND ITS USE.

MR. EDITOR:—The making and applying of manure to the land is often discussed. I would like to express my mind on the subject. If it pays to farm at all, it pays to farm well, and in order to farm to any profit, for much length of time, we must have manure of some kind,—and farmers in the country have to depend mostly on home-made manure. No good farmer will allow anything in the shape of manure to be wasted on his farm. It pays well to keep a good supply of mud or loam in the yard where cattle are yarded, hog pens, and under where manure is thrown out, or under the barn, that nothing be wasted. A great addition can be made by bedding cattle and hogs with poor hay, brush and leaves from the woods, hard wood saw-dust, &c.

As for green manure from the heap, it is not fit to use in any shape until it has been worked over fine with mud, or loam, or sand, if nothing better can be had, and remain until it has heated a little; it can then be spread and it will mix with the soil in good shape—or it can be put in the hill. If spread in a green state, it will be in chunks, the plow will not cover it at all, and the more you harrow or cultivate the land, the more manure will come to the top to be dried and wasted by the sun

and winds. There has been much written in favor of high manuring, and little, if any, the reverse. It is as easy to manure too high for profit as not high enough. A good crop pays better than an extra one. I think too much manure has been spread, of late, and not enough put in the hill. Manure spread on grass land that is dry enough to plow, is one-half wasted. Thorough plowing pays well.

Princeton, 1856.

L. C.

THE COST OF LUXURIES.

We have lately set up a statue of Franklin in our city, and we think we have therein done a good thing; but what would "Poor Richard" think of us, could he actually return to the body, and walk through the streets of New York, Philadelphia and Boston, as of old? All of the honors these cities have done to him would not avail, we fear, to save us from some of those homely but keen-edged sayings for which the old philosopher was famous, as he glanced around him, and marked on every side the evidences of the extravagant habits of the age. The era of modest simplicity and prudence seems to have completely passed away, and the reign of show and extravagance is fully inaugurated. Our imports tell the story. Every week, for months in succession, from a million and a half to two millions of dollars' worth of dry goods of a costly description have been thrown upon the New York market. For the year ending in September, the sum total of dry goods imports in that city alone was \$78,311,878! A dry goods dealer advertises a lace scarf, for which he demands fifteen hundred dollars. Lace at twenty dollars a yard—and that but one-tenth of a yard wide—finds ready purchasers; so do capes at two hundred dollars apiece, and jets at one hundred. Another dealer offers a bridal dress for twelve hundred dollars. Shawls at one and two hundred dollars apiece are not uncommon. Cashmeres from three hundred dollars upwards are seen by dozens in a walk along Broadway. A hundred dollars is quite a common price for a silk gown. Bonnets at two hundred dollars are not unfrequently sold. A set of Russia sable furs costs about fifteen hundred dollars, and yet we have ladies who think they can afford to wear them. The importation of fancy furs at New York this year already amounts to two million dollars, to which nearly another million must be added, for duties and profits of importers.

A fashionable lady spends annually on her milliner, mantua-maker and lace-dealer, a sum that would have supported an entire household, even in her own rank in life, in the days of Mrs. Washington. A thousand dollars a year is considered, we are told, quite a narrow income for such purposes among those pretending to be "in society" in some of our cities. To this must be added the expenditure for opera tickets, for a summer trip to the springs, and for a score of little inevitable *et ceteras*. There are

few, it is true, who are able to indulge in this reckless scale of extravagance; but, unfortunately, these few vain and foolish women are recognized as leaders in fashionable society, and the pernicious influence of their example is felt in every rank, and in every section of the country. In how many families, even in our sober New England towns and retired villages, is it considered of more moment to be showily dressed, than to be graceful, amiable and intelligent!

Ladies, are not these things so? If they cannot be denied, then we ask, might not a selection of Poor Richard's maxims be profitably introduced as a study into our schools, especially those for young ladies?

For the New England Farmer.

STABLING CATTLE AND HORSES.

MR. EDITOR:—One word of comfort to those farmers, who have no barn-cellar. I was invited, recently to visit the barn of Mr. AUSTIN EASTMAN, in the north part of this town. His stables are on a plan of his own. He has no plank flooring. His horses and cattle stand upon the ground. His principal stable is, I should judge, about eighty feet long and twenty-two wide. At each end is a sliding door suspended at top, of sufficient width to admit an ox-team. Into this, he hauls from 20 to 40 cart-loads of mud, earth or sand. After his cattle have lain upon it awhile, he goes in with his plow and turns it all over, then smooths it with a harrow, and leaves it till sufficiently *composted*, when it is removed, and its place supplied by fresh earth.

In this way, all the solid and liquid manure is preserved. When he wishes to manure upland, he carries in muck or loam. When a piece of mucky meadow, sand, instead.

The stall will contain enough to give a good dressing to an acre. And it has this advantage among others, it can be worked all winter, and the manure can be carried out upon soft meadow land, while the ground is frozen and covered over with snow.

That it is as well for cattle to stand upon a plank floor, if properly cared for, I have no doubt. Nor have I, that more than twice as much manure will be saved.

H.

Amherst, Sept. 15, 1856.

FITCHBURG CATTLE SHOW.—We have already given some account of this Show, but did not say, as we intended to, that the Address was delivered by CHARLES L. FLINT, Esq., Secretary of the State Board of Agriculture, and that his subject was the organization, objects and operations of that Board. He gave a lucid statement of its labors, the opposition manifested last winter by some of the members of the Legislature, and the importance of sustaining the Board. It was listened to with attention, and cordially received by an intelligent audience.

☞ A suspension bridge is to be built from Cincinnati to Covington, sixty feet in height.

For the New England Farmer.

THE DIGNITY OF LABOR.

BY SUSIE SUMMERFIELD.

It may be deemed inappropriate to some of my readers, that I have associated two such words as dignity and labor, since a larger portion of society cannot any how classify them in a harmonious union. Why is it thus, since there truly is a peculiar connection between true dignity and labor, which is constantly exhibited by the moving mass of the American population? It is simply because we have been governed by false notions, as to what true dignity consists in. Especially do we notice that an erroneous idea has been disseminated among the farming population of both sexes, in this prolific and beautiful country of ours.

Though towering mountains and lofty trees; verdant meadows and flowering shrubs; roaring cataracts and majestic rivers; shelving rocks, and rolling prairies, and great extent of continent, whose borders are continually bathed in the blue waters of the Atlantic, or in the still depths of the broad Pacific, are ours to behold, to admire, and all of which should inspire the beholder with true, pure elevation of moral feeling, yet we fear that we lack most in this right kind of elevated feeling. It was in the free exercise of our "Pilgrim Fathers'" sinewy arms, that the tall trees bowed their majestic heads, as the forest echoes rung out their requiems; and it is by labor that finally the New England States are dotted over with fertile farms.

Labor has made the clustering vine thrive, where once the deep-hued ivy crept around towering oaks, and yet, who dares to stigmatize our forefathers, as being undignified? It was by toil that our Pilgrim mothers hatchelled, spun and wove the flax, which they fabricated into linen, and by industry they clothed their families; while they spurned to keep cemented the chain with which England then thought to wreath about Young America's brow, while noble dignity attended their every look; and yet, where shall we find the aristocrat of the present day, who blushes because his ancestors labored?

There never was a useful invention put to effect, without thought and labor. All that contributes to the elegance and refinement of civilized and enlightened society, has been effected by mental and physical labor. Why, is it not by tugging toil that our cities are adorned with intricate structures of masonry and carved work, that unsightly and annoying hills are graded, and transformed into smoothly paved streets?

Is it enchantment that has made cooling, graceful jets of water, continually sparkle in the sunbeams; that has festooned trellised bowers with roses, that has trained the lily-cups, which are dame nature's perfumery tankards, whose aroma charms the exquisite gent and his dainty lady, as they aristocratically promenade through our public gardens and shady parks? No! Labor has done it, while it has made beautiful villas, long rows or superb buildings, inviting farm-houses, yea, even whole villages spring up, beneath the deep shade of majestic elms, maples and willows, all over the New England States, where once the dense forest was undisturbed. It is labor, which will establish cities, towns and villages over the vast prairies of the West, where now the antelope and wild horse range. Now, is there aught humbling connected with these desirable transformations? But labor

accomplishes them, and can the sturdy yeoman, the ingenious mechanic, the muscular-armed mason that polished the rough stone, the farmer's son, or his bonny, red-faced daughter, for one moment, admit that there is *anything but dignity connected with honest labor?*

I have met with "would-be ladies," who would not for worlds acknowledge that a "chequered apron" had come in contact with their delicate tissue dresses; or that their rose-tinted fingers were ever dusted over with flour, as they have prepared the tempting muffin, or juicy pie. I have seen ladies, that could give the modulated shriek, as they stood amidst Nature's sublimities, when there was nothing but bold pictures of wonderful design, upon Nature's page, to keep them silent, enthralled with admiration! I have seen young and even "oldish" ones, affect an ignorance respecting common things and look with startled, meaningless stare, when conversation was turned upon the occupations of the laboring classes. And I did once hear of a lady inquiring of a gentleman "what that animal was with powder horns growing in its forehead?" as she pointed to a cow! But all this compels us to say from our souls that we "loathe all affectation," and to affirm, that such are absurdities of society. We believe, that this all occurs, because, that an erroneous idea, as to *what* is really excellent, admirable, in the female character, is prevalent in society; and we hope our New England farmers' daughters will be up and doing in this matter, and see to it, that they live it down. Why, ladies, poets have sung about "bonnie lassies" that have milked the cows, and husked the golden eared corn, so don't pout, if it should be known that you have done such an act, in your life-time, for we do not believe poetry ever emanated from real vulgarity!

But I would not exclude refinement and elegance from the farmer's household. I would advocate the introduction of gravelled walks, climbing roses, luscious fruits, along with plump pumpkins, round cabbage heads, mealy potatoes, golden corn, the best breeds of cattle and swine, and the chemical compost to be made without-doors, while within, we would appropiate the rosewood piano, that its tones might cheer up father, when he looks too much upon life's "shady side," and to make brother forget his bone-aches, while he joins in the duet with his rich, manly voice, after he has been plowing all day; all of which makes mother ply her knitting-needles more vigorously, while a tear will stand in her eye, in spite of her, as she looks over her glasses upon her household treasures, and her heart goes out in one great throb of love toward them, and she is grateful to God that He has lent them unto her!

Brussel-carpetts, alabaster statuary, and carved mahogany and fanciful ornaments, are as appropriate for the farm-house, where means will afford, as they are for the dwellings of the moustached lawyer, or princely merchant, while the introduction of such refinements have a softening, elevating influence. But the sons and daughters strive to prove that themselves are the most attractive ornaments, and blend utility with beauty.

Allow me to say one word to the farmer's sons of our country. Let not a blush suffuse your cheek or deteriorate from your estimation of yourselves, because it has been your destiny to labor hard. If you are upright and honest, if you but aspire af-

ter an association with science and intelligence, as you toil, remember, that you are America's noblemen! Sneering allusions have often been made unto the dust beneath our feet, as follows:—"I care no more for such and such, than I do for the dust of the earth." But ought we not to care for the dust of the earth? What is there beautiful, wonderful, and needful for our pleasure and life, that does not originate from the earth? It is in the brown dirt, where the diamond, the topaz, the amethyst, and the gold, lie embedded. It is from the earth, that the food for millions of human beings springs. The dust of the earth was the ingredient which God used, when he made man after his own image, and shall man blush, because it is his province to furrow into the rich soil? I again say, farmers, farmers' sons, and farmers' daughters, you are mistaken, when you once dream that anything but dignity is connected with your noble calling in life. Seek to recognize the fact, that one class of human beings depends upon another!

Pause, and look into the future, and see what labor, intelligence and ingenuity will eventually make the science of agriculture. It is progressive, it is a necessary art, and though attended with toil, *it is dignified!* Let the rising generation be imbued with the right kind of dignity. Let our scholars apply their botany to the general economy of vegetation, their geology to practical uses, so that rocks may be pulverized, and miasmatic bogs be converted into fruitful meadows by chemical compositions, till our fields shall vie with the western prairies. Let them combine the real with the poetical. As they attend scientific lectures, let them not be enabled to merely talk of the names of the gases, striking phenomena of electricity, of the galvanic battery and other popular exhibitions of the lecture-room, but let them learn to take a general survey of the laws of the universe, and bow to the conviction that man has been created by a hand divine, for some mission of good in the world. Let them come to years of maturity cherishing correct notions, realizing that there is true dignity connected with labor.

Mr. Editor, can "Susie" once more be allowed to say a little in your "agricultural department?" She never would have had her "agricultural enthusiasm" so aroused, had she not read the short article entitled, "Why don't you sell your Farm," in your weekly paper, which closed thus:—"I expect under these circumstances to be respected yet." As she read this sentiment, she said, "Humph, I guess he is respected, and so is every farmer, at least ought to be, or any how, I respect them, and like them too." This real dignity, must glow within the farmer's soul, and I guess the time has now come, when they will be respected, and even kindly regarded by all the ladies! So don't chide, if "Susie" will talk to you with her pen.

REMARKS.—The articles with the signature above, are written by a lady of mature years, and living in the country, and more or less engaged in the cultivation of fruits and flowers, and who feels the liveliest interest in everything relating to the farm. Could but thousands of our females catch her spirit and enthusiasm, then, literally, would the "desert blossom as the rose." Not the fields alone,—but how would the *home* blossom with new attractions,

with contentment and sweet affections and refinements of every kind. *If woman wills it, it shall be done!* She has the power, and is answerable for the trust.

THE FARMER'S SONG.

Cackle and blaze,
Cackle and blaze,
There's snow on the house-tops—there's ice on the ways,
But the keener the season,
The stronger the reason
Our ceiling should flicker and glow in thy blaze;
So fire, piled fire,
Leap, fire, and shout—
Be it warmer within,
As 'tis colder without;
And as curtains we draw and around the hearth close,
As we glad us with talk of great frosts and deep snows,
As ruddily thy warmth on the shadowed wall plays,
We'll say winter's evenings outmatch summer's days,
And a song, jolly roarer, we'll shout in thy praise.
So crackle and blaze,
Crackle and blaze,
While roaring the chorus goes round in thy praise.

Crackle and blaze,
Crackle and blaze,
There's ice on the ponds, there are leaves on the ways;
But the barer each tree
The more reason have we
To joy in the summer that roars in thy blaze;
So fire, piled fire,
The lustier shout,
The louder the winds shriek,
And roar by without;
And as red through the curtains go out with their light,
Pleasant thoughts of warm firesides across the dark night,
Passers by, hastening on, shall be loud in thy praise;
And while spark with red spark in thy curling smoke plays,
Within the loud song to thy honor we'll raise.
So crackle and blaze,
Crackle and blaze,
While roaring the chorus goes round in thy praise.

THE SNOW.

The snow was proverbially called the "poor farmer's manure" before scientific analysis had shown that it contained a larger per centage of ammonia than rain. The snow serves as a protecting mantle to the tender herbage and the roots of all plants against the fierce blasts and cold of winter. An examination of snow in Siberia showed that when the temperature of the air was seventy-two degrees below zero the temperature of the snow a little below the surface was twenty-nine degrees above zero, over one hundred degrees difference. The snow keeps the earth just below its surface in a condition to take on chemical changes which would not happen if the earth were bare and frozen to a great depth. The snow prevents exhalations from the earth, and is a powerful absorbent, retaining and returning to the earth gases arising from vegetable and animal decomposition. The snow, though it falls heavily at the door of the poor, and brings death and starvation to the fowls of the air and beasts of the field, is yet of incalculable benefit in a climate like ours, and especially at this time, when the deep springs of the earth were failing and the mill streams were refusing their motive powers to the craving appetites of man. If, during the last month, the clouds had dropped rain instead of snow, we might have pumped and bored the earth

in vain for water; but, with a foot of snow upon the earth and many feet upon the mountains, the hum of the mill-stones and the harsh notes of the saw will soon and long testify to its beneficence. Bridges, earth-works, and the fruits of engineering skill and toil may be swept away, but man will still rejoice in the general good and adore the benevolence of Him who orders all things aright. The snow is a great purifier of the atmosphere. The absorbent power of capillary action of snow is like that of a sponge or charcoal. Immediately after snow has fallen, melt it in a clean vessel and taste it, and you will find immediately evidences of its impurity. Try some a day or two old, and it becomes nauseous, especially in cities. Snow water makes the mouth harsh and dry. It has the same effect upon the skin, and upon the hands and feet produces the painful malady of chilblains. The following easy experiment illustrates beautifully the absorbent property of snow: Take a lump of snow (a piece of snow crust answers well) of three or four inches in length, and hold it in the flame of a lamp; not a drop of water will fall from the snow, but the water, as fast as formed, will penetrate or be drawn up into the mass of snow by capillary attraction. It is by virtue of this attraction that the snow purifies the atmosphere by absorbing and retaining its noxious and noisome gases and odors.

For the New England Farmer.

"A GOOD COW MAY HAVE A GOOD CALF."

This sentence has often been construed as expressive of a doubt as to the expediency of attempting to raise the offspring of superior animals, in the hopes of producing their like. I believe it not wise thus to construe it. I think the chance of growing valuable animals, from those which are themselves valuable, is much greater than from those which are not.

In illustration of this principle, my attention has lately been called to a heifer, three years old, now owned by Mr. O., the offspring of Mr. Huntington's cow, that was sold last April for \$150, and which was said to have yielded more than *two pounds* of butter per day the previous season. This heifer is now of good size, bearing a strong resemblance to the cow from which she came, and yields *sixteen quarts* of milk daily. Of her butter-making qualities I am not advised, but her milk is of first rate quality. If I do not mistake, this a very good product for an animal of this age;—and I know no reason why this animal should not be worth as much as any of the same age of the most improved breed—although her *name* and *number* may not be found in the herd-book.

I understand that the mother meets the expectations of the purchaser, yielding *twenty quarts* or more of milk daily. I hope these animals will be exhibited at our Shows, that the farmers may see what can be done by *selecting*, and *care in rearing*.

Sept. 30, 1856.

MAINE STATE SOCIETY.—The time of meeting of the Maine State Agricultural Society will be holden at Portland, October 21st, 22d, 23d and 24th, instead of the 28th to 31st, as has been stated heretofore.

MIDDLESEX COUNTY CATTLE SHOW.

The annual exhibition of the Middlesex County Society took place at Concord, on Tuesday, Sept. 30. The weather was unfavorable, there being a drizzling rain, interspersed with an occasional "drencher," throughout the day. But in spite of all the discomforts and discouragements of a rainy day, the old society did not, probably, come off second best to any show that has taken place! The numbers in attendance, to be sure, were not so great as they might have been under a clear sky,—but all the various departments were well filled, and the whole passed off with promptness and a good degree of enthusiasm.

The *Plowing Match* took place near the depot on a fine field belonging to Mr. HENRY A. WHEELER, who, in the most accommodating spirit, allowed the society to go there after it had been disappointed in arrangements to plow in another place.

Twenty-two teams were entered, fifteen only were present and contested, but their contest was animated, and resulted in the execution of the best plowing, as a whole, that we have ever seen on a similar occasion. Several double plows were used, and they left the ground in condition to receive even the smallest seeds, with very little labor after plowing. Middlesex county cannot be beaten, we think, if it can be equalled, by any plowmen in the country. Plowmen and teams have been trained there, until a degree of skill has been reached, which we think accomplishes all that men, team and plow can do. The work of the single plows was excellent, but we think the double plow, wherever it can be used, will save, in the after cultivation, all the cost of plowing the land.

The *Spading Match* afforded a spirited scene. Ten stalwart young men entered the lists, and kept time with the stirring notes of the Lowell Band, while a vast throng surrounded the hollow square and watched with eager interest the progress of the work. Even the pedlars and showmen were hushed for a time, and mounting the highest box of their cart, peered over the heads of the multitude to catch a glimpse of the stout contestants within the ropes. Several of the squares, five feet by twelve, were left in a condition fit to receive the celery, or other seeds as small. There is considerable skill in good spading, and there are many persons calling themselves good gardeners, who cannot spade rapidly and effectively; this part of the exhibition, therefore, is an important one, and is always watched with interest.

Ten teams engaged in the *Drawing Match*, or trial of strength and skill in working oxen. The loads to be drawn, backed and turned, were one of 4,000, and the other of 4,500 pounds, and they were moved up hill and down with certainty and ease. After this Mr. SAMUEL BLOOD, of Pepperell, unyoked his cattle and drove them in every direction through

the enclosure, side by side, as evenly as though the yoke were upon them, then backed the nigh ox to the off side, and through various interesting evolutions which showed how much may be taught the patient animal, and how much he may be brought under the control of man. His cattle did not appear to fear him, but watched, with ear and eye, every sound and motion, and evinced a great desire to answer his commands. This exhibition was exceedingly gratifying to all, and elicited warm approbation. Mr. A. B. LANE, of Bedford, had a pair under good control, which he had been training only a single month.

The Address was by Rev. AUGUSTUS R. POPE, of Somerville, and its subject was "Agricultural Head-work." He said there are two classes of farmers, one of which will follow in the old ruts and beaten paths pursued by their forefathers, casting aside everything in the shape of improvement, while the other class are willing to adopt such a system of agricultural chemistry as will tend more rapidly to bring forth the rich products of the soil. Agriculturists should continually endeavor to make the last product, whatever it may be, better than the previous one; and by so doing the farmer will never be obliged to say that an article has "run out." It is necessary to join agricultural head-work with hand-work, and in this manner the soil can be fertilized so as to make nature bring forth her richest bounties. It was listened to with much gratification, and undoubtedly with profit.

But it is at the dinner-table at Concord, where the most interesting and we think the most profitable part of the occasion takes place. Beside a good dinner, there are always accomplished speakers present, who occupy the time with short and appropriate remarks. At this meeting, among other things, a brief history of the society was given by its Secretary, and the ancient records, commencing in December, 1793, were shown and quoted from. They are in perfect preservation, and very minute in their details of business meetings.

The show of *Fruit* surprised all. The collection was of the highest order in point of quality. A rule prevents the admission of a large amount, limiting it to specimens of twelve of each variety.—This gives the common farmer a fair chance with the nurserymen, on most of the entries. The arrangement of the fruit, and all articles in the building, was under the direction of Capt. JOHN B. MOORE, of Concord, who not only knows how to produce good fruit and vegetables, but to arrange them for exhibition to the best possible advantage. His long experience in the State Horticultural Society has given him much skill in this department.

The *Vegetable* department was well represented by specimens suitable for the table, of parsnips, carrots, beets, turnips, &c.

There were several articles for the attention of

the committee on inventions, among which was a Power Press, Cider Mill, and Root Cutter, combined, manufactured and sold by O. NICHOLS, Esq., of Lowell. It has high testimonials of its practical utility. Mr. Rufus Spalding, of Lowell, states that he made from seventy-five to one hundred barrels of cider with it last year,—that he could and did, grind a bushel of apples in one minute with it by hand power, and that he considers it superior to any mill ever brought before the public. It is intended to reduce turnips, carrots, &c., to a pulp, so that they may be strewn upon cut hay and fed to cattle. It is said, also, to be adapted to other purposes. We have seen it in operation two or three times, and think it has valuable powers. Some articles of cutlery were also presented and pronounced very fine.

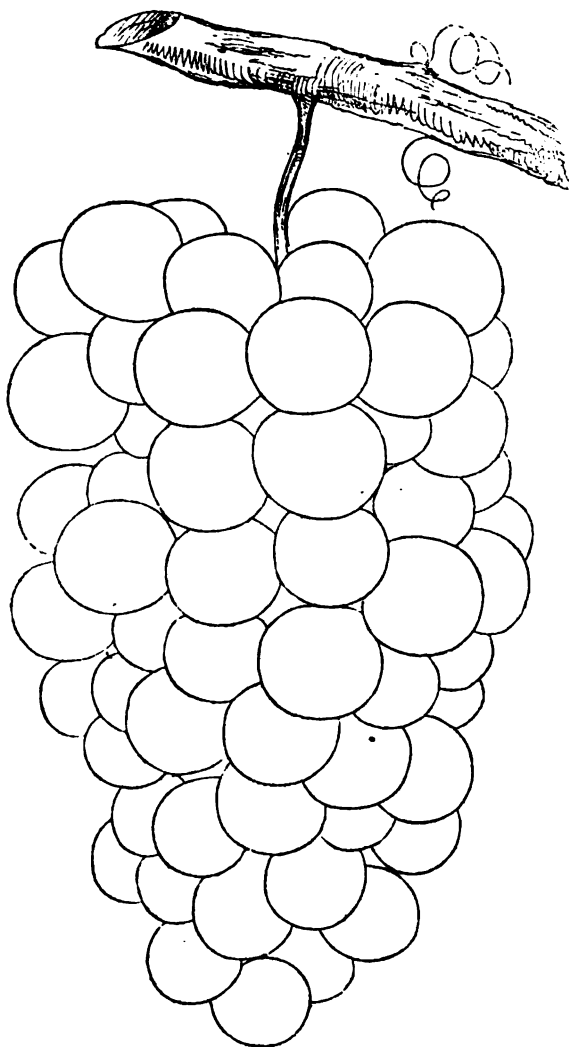
There was on the table a fine show of Shaker articles, consisting of tomato catsup, pulverized herbs, brooms, sieves, &c., all showing the neat finish of the Shaker work, and forming quite an attractive feature. They were presented by A. H. Grovesnor, from the Society at Harvard.

The Show of *Cattle, Horses, Swine and Poultry*, though not remarkably numerous in either department, all excelled in quality. Rarely have we seen so much stock of first quality at any exhibition in New England.

So, notwithstanding the elements were unpropitious, the old Middlesex Society set a good example to her two lovely daughters, and bids them good speed in thier work.

FALL TREATMENT OF ASPARAGUS.—As soon as the heavy frosts come to kill the tops, they should be cut and removed to the sty, or to the compost heap. The surface of the beds, which has become hard, and perhaps weedy, should now be thoroughly scarified with the hoe, or forked over, taking care not to injure the crowns. About the last of the month, spread on a heavy coating of stable manure, at least a half cord to every two square rods. The rains will carry down its fertilizing properties to the roots, and give them great strength and vigor for an early start in the spring. If near the shore, where marsh mud is accessible, a coating of this, one inch thick, in addition to the manure, will do good service. We have also found it an excellent plan to cover the beds with sea-weed or old hay during the winter. The roots keep active longer before the ground closes up; the ground does not freeze so deep, and starts sooner in the spring. The mulch of course needs to be removed as soon as the winter is over. Asparagus is a gross feeder, and can be had in its perfection only by high manuring. This we believe will pay, whether the bed have been thoroughly prepared or not.—*American Agriculturist.*

 A hog exhibited at the Chillicothe (Ohio) Fair, last week, weighed 1135 pounds, and measured 9 feet in length, and about the same in girth. He was two years and three months old.



REBECCA GRAPE.

Under this name a new grape was exhibited at the late annual exhibition of the Massachusetts Horticultural Society, which attracted much attention, and which seems to promise to become an acquisition of great value to our limited number of hardy grapes.

We have no white grape which is perfectly hardy, those that ripen their fruit out of doors requiring to be covered up in the winter. If this grape shall be found equal to all that is said of it, and that it promises to become, it will supply a want that has long been felt, in not only adding a valuable variety to the few really good grapes, but also one of a color so desirable, but heretofore never obtained, except combined with so small a degree of hardness as to make the cultivation of the fruit impracticable.

We are not able to give a full account of the grape, but take pleasure in presenting our readers a cut of it, and in quoting the following description from a letter written by a gentleman in Hudson, who has had opportunities to observe the vine from its first bearing.

"The 'Rebecca' is an accidental seedling which originated in the garden of Mr. Peake, Hudson, N. Y., whether from the seed of native or foreign grape is not known; it is perfectly hardy, enduring our severest winters in any exposure without injury. The original vine has fruited for the last five years. It is a good bearer and vigorous grower, extending its shoots from fifteen to twenty feet in one season with good cultivation. The bunches are about the size of the Diana, compact, without shoulders, and the berries are of similar size, the flesh is soft and melting, with a luscious flavor. Skin thin, of a beautiful color, and ripens its fruit at Hudson, where it originated, ten days earlier than the Diana or Isabella."

The vines are advertised in another column by Mr. Geo. Davenport, 14 Commercial Street.

GROWING GRAPES IN POTS.

One of the finest ornaments produced by horticultural science is the raising of "grapes in pots." There can be no sight in Pomology more beautiful than a well-trained vine in full fruit, for an ornament to a conservatory, or for a table at a public dinner. To accomplish this desirable object in the most speedy way, a good branch of a bearing vine should be layered into a pot, or small tub, in the winter, before fruit spurs start. In this way it will form its roots and immediately set its fruits, go on and perfect them, and thus present in a single year a handsome vine. With a judicious care, the vine can be separated from the old one, and the pot removed with the fruit perfected. Great care should

TO PRESERVE TREES FROM MICE.—Mr. David Gray, of Deerfield, Oneida county, who has several large young orchards, recently informed me that for the last two or three years he has used a very simple preventive against the girdling propensities of mice, which has succeeded in every case.—He adds one pound of tallow to two quarts of common tar, melts and mixes thoroughly, and applies while warm with a paint brush to the trunks of his young trees, from the ground as high up as he thinks there is danger of their being gnawed. He makes the application just before winter sets in; any time late in the fall will answer. This simple application he finds entirely successful, for while his neighbors have suffered largely from mice, he has not lost a tree. He is very confident that common tar thus mixed and applied has no injurious effect upon the trees.

Mr. Gray's plan commends itself for its simplicity, and if it proves as successful with others as it has with him, of which I have no doubt if properly applied, it will prove of great value to those who wish to raise orchards or nurseries.—*Country Gen.*

be had not to let the vine *overbear*: this would affect the size of the clusters, and the size of the berries. The circumference of the vine will always guide the grower as to the number of clusters and the weight of crops that the vine can ripen.

"Hoar's Treatise on the Vine," is a standard work, and will be valuable reference to grape-vine growers.

We have been led to these remarks by seeing a vine thus grown in a pot by Mr. Lee, of the Oakland Gardens, and which is now exhibiting at the stall of Mr. H. Gushee, in the Washington Market. On this vine we saw one handsome cluster and nearly a dozen of half growth, with berries of various sizes. Had every bunch but four been taken from the vine, and the whole strength of the vine given to ripening those, the result would have been twelve or sixteen pounds of delicious grapes—now only one bunch is mature, the others are worthless; and the vine is injured for two or three years. This is always the result of overbearing young vines or trees.—*California Farmer*.

THE CHINESE SUGAR CANE.

The Chinese Sugar Cane has come to the ordinary name of the *Sorgho Sucre*, a most valuable plant of the sugar cane order, and therefore, allied to the maize or Indian corn, but more nearly to the broom corn. Its cultivation has commenced amongst us, and there is now in Washington more than an acre of it growing luxuriantly and promising a yield of considerably upwards of a hundred bushels of seed, besides many tons of stems and foliage, rich with saccharine fluid and solid food material for horses, neat cattle and swine. Not only here, but in various and widely distant parts of the Union has trial been made of it, and with uniform gratifying results. We have read a letter from a farmer in Illinois who has tested its character, and reports of it in the most favorable manner. Out of a gallon of the liquid sap in the stem, which he expressed by the primitive contrivance of a rolling-pin, he obtained, by boiling, a quart of molasses, with very little impurity and of approved taste. The usual proportions of sugar to sap lie between fifteen and twenty per cent., the crystalizable sugar increasing with the decrease of the latitude. Besides this proportion of sugar there is an amount of perhaps 5 to 8 per cent. of uncrystalizable sap, from which a very agreeable beverage can be made, and alcohol distilled more cheaply than by any other method. This sap, strange to say, if set with the oxide of tin, will dye silk of a beautiful pink.

As a food for stock of all kinds it seems to overtop all that we now possess, furnishing, in fair soils, 25 tons per acre of excellent fodder, every bit of which is greedily eaten by animals. The seed, too, by which the plant is propagated—in this, unlike and superior to the sugar cane of Louisiana, which is raised by cuttings—are fit for human food; at all events, when ground and made up into cakes, after the manner of linseed cakes, they supply a good material for fattening stock.—The brush or top from which these seeds are taken, is not without its service, for the plant is a species of broom-corn, and, therefore, its top, when deprived of seed, answers well wherewith to manufacture brooms. When the sap, top, seeds and leaves are taken, leaving only the crushed stem, it still has an economic value: paper can be manufactured from it.

This valuable addition to our vegetable production was originally a native of China, but has been sedulously cultivated for several years in southeastern Caffraria, whence it passed into France and Algeria, in which last country it comes to great perfection. It would be hard to calculate its value. It constitutes every farm on which it is grown its own sugar-camp, orchard, winery, and granary, as well as a stock farm and dairy; indeed, the "*Sorgho*" may be deemed a sort of vegetable sheep, every part and constituent of which is valuable.—*National Intelligencer*.

For the New England Farmer.

MY FRIEND'S MISTAKE.

MR. EDITOR:—My friend's mistake is this; he works as a matter of necessity to perform what must absolutely be done on his farm towards obtaining a living. His situation is pleasant, and entirely his own, affording great facilities for working to advantage, and also for pleasure. He has a fanciful horse and carriage, and an excellent wife, who is too often ready to improve the pleasantries of riding and company. He also takes the campaign paper of his district, and is quite fluent and intensely interesting on Kansas affairs, is down on the Administration, and up for the next General Court.

A thousand voices, from the city to the country, exclaim:—"O, that I was a farmer! It is the mistake of my lifetime, it is the mistake of my own! My dying father said, 'my son, remain on this goodly heritage, and study to be a farmer, and blessings shall await you.' I would not listen to the counsel, I spurned it, it was beneath my noble nature. Now, I have in all my wealth no peace, but continued anxiety, for I have not been what I ought to have been, and cannot answer for any of my many derelictions of duty. And he, whom I see so charmingly and comfortably seated by his wife, in that nice carriage, worked for my father, married my sister, lives on the homestead, and takes, I am afraid, down-hill comfort! Where is the mistake?"

In the farmer it is too much capital and time devoted to horse and carriage, politics and company, and too little attention expended upon the study and practical examination of "*Dana's Muck Manual*," that the farm may be advancing in value. Too many superfluities about the house, and a laxity of judgment perceptible about the barn-yard. Too great a care for external adornments for children, while entirely forgetting the mind and soul. Too much overlooking what is for real benefit, for present gratification. Too much "living while we do live," while not willing to raise a finger to alleviate the hardships of mankind, but perfectly ready to anathematize with the unbridled tongue the cruel oppressor!

No wonder that the farmer's son will not stay at home; there is not that noble interest manifested and exerted on the farm that will excite and stimulate the better susceptibilities of the youthful mind and intellect.

The city man longing for a farm must be discontented, and surely it is better for us all to be honorable and contented in our various pursuits, and joy and gladness will eventually crown us.

E. J. W.

For the New England Farmer.

MAKE LABOR AGREEABLE.

Last eve as I was in at a neighbor's, I heard the father express to his sons a hope that they would take good care of a calf which he intended to purchase for them, to which the mother replied it would only bring censure on them to feed it with corn and potatoes, which they immediately expressed a wish to do. Then the thought suggested itself at once, that though the father purchased it with the hope that it might influence them to take good care of it, and consequently of other things, still, would they not be likely to err in want of attention, or by feeding it with what the father would think he could hardly afford? Then the thought presented itself, why would it not be better for him, and every man who possesses a son and a garden spot, to expend what they wish to give them, for influences of a like nature, in purchasing some light, handy tools, for any thing in which a child takes a pride he likes to have for a constant companion; and would not possessing good handy tools lead them to love work a part of the time as well as play, and especially, when they are assisted to make a garden for themselves, and taught how to transplant fruit trees of their own? Can a parent find any better or surer method to keep their children at work, and save themselves the trouble and vexation of forcing them to work with large unhandy tools, than by furnishing them with lighter, modern implements, that they will find a pride in using and keeping clean? Though they are children now, how soon will they be called to act for themselves, and the reins of government even be in their hands.

I have derived much assistance in training children from a work by A. B. Muzzey, entitled "Aid to Parents."

Kennebunk, Sept. 27, 1856. A. A. WELLS.

For the New England Farmer.

LET THE POOR LANDS GO.

MR. BROWN:—In a recent number of the *New England Farmer*, I noticed some remarks of yours while at Hancock, N. H., on a rustication tour, in relation to the prospects of our glorious New England in coming times; and I can assure you that you are not alone in the entertainment of such views.

While New England is blessed with some of the best soil in the Union—soil requiring perhaps the bestowment of as little labor, and returning as great a reward for that labor, as any other known territory, it has some of the hardest soil perhaps in the known world—soil as valueless in its products, as are the deserts of Arabia. To cultivate these lands with the expectation of making them productive, is a wild scheme—a project without the least shadow of hope for remuneration for the labor bestowed on them, more especially since labor commands such enormous prices. When labor was low, and we Yankees were willing to put up with common ordinary fare, then to labor on such lands was no offence to our expanding genius. But now it will not pay—our enterprising young men no longer think to harden their hands by honest labor, but rather direct the steam or telegraph dispatch—hand-work has given place to head-work.

Foreigners are taking the work from, and filling the places which should be occupied by our own sons and daughters, who are too ready to consider

it degrading to be seen side by side with them in the labors of the field or kitchen.

This being the case, the farmer is under the necessity of applying the labor of the unskillful foreigner to that portion of his farm which is already most productive, that he may be enabled to meet current expenses and perhaps save a dollar against time of need. By this management our more sterile lands are left untouched—acres upon acres of which had by far better be left to the growth of wood, than be cut over with the brush scythe, followed by fire, as is often the case.

The white birch is readily obtained from the seed, which may be sown at the same time with the pine. The birch is of quick growth, which being taken off leaves the pine to spread its branches, which in its turn will, by the help of birds and squirrels, give place to the trees which from "little acorns grow." What land we can cultivate to profit, let us take care of—with more than that, it is folly to engage.

Shewsbury, Sept. 23. THOMAS W. WARD.

For the New England Farmer.

CULTURE OF THE PEAR.

MR. EDITOR:—I have, for many months past, been a constant reader of your valuable journal, and though not at present a practical farmer, it affords me great pleasure to read it. All my early impressions in regard to farming were of the most common order, and I have spent many years since in following the sea. I had, however, a strong natural taste for cultivating the soil, without the means of indulging it, but from a child entertained a love for the beautiful in nature, and devoured with great satisfaction all agricultural papers or books that happened in my way. I could not, when a boy, resist the temptation of cutting and trimming what few trees were on my father's farm, that they might grow and form handsome tops, and always did it with a sharp knife, and without any instruction, other than my own impulse. I felt the importance of cutting off a limb smoothly, and often did my mother come to the door and beg of me not to spoil the trees. The study of agriculture is to me exceedingly instructive. It elevates the mind and harmonizes the feelings in all that is interesting and beautiful in nature. Men are bid to behold God, and the goodness of God, in the cultivation of the soil.

In 1850, late in the fall, I sent from Albany to a brother in Cayuga Co., N. Y., some twenty pear trees of small size; Bartlett, Seckel, Winter Nelis, and some other choice varieties. They were set out in holes dug five feet in diameter, and eighteen inches deep; all the injured roots were carefully cut out, and the holes filled with compost from the wood-pile, or chip-heap and barn-yard. The first year they rooted well, but did not grow much; in 1852, I went out and spent two years. All my old disposition for cutting and trimming has returned, and with a sharp knife, I introduced myself to the young orchard of some fifty trees. The pear trees received my especial attention, cutting out the stunted wood, and shaping the tops with regard to beauty of form, according to my notions of a beautiful tree top, taking great care to cut the limbs smoothly and closely, that the bark might cover the wound smoothly. The orchard was kept highly manured, and in cultivation as a

garden, in part. I washed the trees with a weak ley, taking off all foreign substances, about the time they were in blossom. When a sheep or lamb died upon the farm, they were immediately buried with great care around the pear trees. In August of '62 they commenced to grow rapidly, previous to that they had grown but little. In '63 the growth was most rapid and vigorous. In '64, the trees set full of fruit, but only a few were left to grow and mature, but the trees grew with great rapidity, and were vigorous and healthy. In July, '65, they had attained a height of more than twelve feet, and were loaded with fruit, fair and of large size. One little Seckel that had been injured by one of the horses, I had nursed with great care, by digging a trench all around, just outside the roots, and filled it with rich compost, was loaded down with fruit. The Bartlett and Seckles were the heaviest in fruit, but all were loaded with the fairest fruit I ever saw. The orchard was exposed to all winds. They were washed once a year. The soil was a rich loam, slightly mixed with clay.

New Bedford, Sept., 1856.

THE RAIN-POWER.

The rain-power is steam-power. Older than Fulton, Watt, or the Marquis of Worcester, it has operated from the beginning, since the day when first the sunbeam dallied with the wave, and the rainbow was woven for their bridal robe. We may judge something of the grandeur of this apparatus, when we reflect that all the rivers in the world are only the overplus of its stores, only the drippings from its vast magazines, as its bounties are distributed over the land. Rivers are of course fed by the rains, and represent the *excess* of moisture deposited on the country which they drain. All the water-power in the world—the stupendous Niagara, the Mississippi, the Amazon, the Nile, the Ganges; every valuable or invaluable water privilege that floats Yankee logs, or chokes with Yankee sawdust; each and all, are but the *residue* of the steam power which waters the earth. All gain their force from the labors of steam. In some far off sea, the power of sun-heat lifted the steaming vapor high in air. Leagues away the cloud floats before the winds, still upheld by heat, till the cold air benumbs the fingers of the great water-carrier, and forces him to drop it in rain. The amount of the yearly fall of rain varies from twenty-three feet, in some parts of South America; down to nothing, on some desert portions of the globe. Our New England average is thirty-eight inches. The mean for the entire surface of the globe is about five feet. This would require a body of water, as long as from Boston to Liverpool, one thousand miles wide, and two hundred and twenty-four feet in depth, each year.* This mass of water is each year hoisted up hundreds of feet into the air, carried, some of it thousands of miles, and then let down again where it is wanted. "What a powerful engine is the atmosphere! and how nicely adjusted must be all the cogs and wheels, and springs and pinions of this exquisite piece of machinery, that it never wears out, nor fails to do its work at the right time, and in the right way."—*Universalist Quarterly*.

* Physical Geography of the Sea, sec. 145. Prof. Murray has, we think, erred in his calculation, by failing to subtract the breadth of land which lies under the tropics, say ten thousand miles.

HOW THE HUMAN BODY KEEPS WARM.

The phenomena of heat in the body is something like that produced by the combustion of fuel, such as coal; only in the body the combustion is slow, and the heat far lower than that of flame. The act of breathing is very like the bellows of a smith, and our food is very much the same as the coals which he puts upon his fire. It is probable that some heat may be produced in the various secreting organs of the body by the chemical action which takes place in them. From these two sources animal heat is probably derived. It is positively certain that the blood is heated at least one degree of Fahrenheit in passing through the lungs; and that arterial blood is warmer than venous.—Most of the phenomena which occur in the production of heat may be explained by attributing it to a combination or union of the oxygen of the air with the carbon of the blood in the lungs.

This supply of animal heat enables the body to resist the fatal effects of exposure to a low temperature. In the polar regions the thermometer often falls to 108 or 109 degrees below zero; and yet the power of evolving heat, possessed by our bodies, enables us to resist this degree of cold. The temperature of our bodies in that region is about the same that it would be were they in the regions near the equator. The thermometer, if plunged into the blood of a man in both situations mentioned, would indicate about the same. Our bodies have nearly the same temperature in both places; because, so to speak, and it is not very absurd, the combustion or fire in the lungs gives out more heat, it burns with greater intensity in polar regions than in the equatorial. We all know that a large fire will warm our rooms, no matter how cold it may be. We can give our rooms the same temperature in winter that they have in summer, if we regulate our fires accordingly. A little more fuel is all that is requisite for that purpose. Nature has so ordered that when our bodies are in a cold temperature, we inspire more air than when they are in a warm temperature. In other words, she compels us to take in more fuel, and increase the combustion in the lungs.

The Esquimaux eats blubber, which is mostly all carbon, and the Laplanders drink plenty of grease. In warm countries, the food of the Laplander would kill the negro, and food of the natives of the West Indies would not be able to keep the Esquimaux from perishing with cold.

The temperature of the human body, and of most warm-blooded animals, is from 98 to 100 degrees Fahrenheit, and is affected but a few degrees by any variation of that of the surrounding atmosphere. Animals are warm-blooded when they can preserve nearly an equal temperature, in despite of the atmospheric vicissitudes from heat to cold and from cold to heat. They have a temperature of their own, independent of atmospheric changes.

The time will soon arrive when thicker clothing must be worn by our citizens at the North. They must line their vests well along the back bone, and provide against freezing. It is a fact that warm clothes tend to save food in proportion to the cold of the atmosphere. This is the reason why cattle that are well housed consume less food, and keep in better condition, than those which are shelterless and exposed.

ANTI-PROGRESSION.

One of the most curious pages in the world's history, is that which records the treatment experienced by the men to whom the race is indebted for most of the progress it has made in the arts of life. To be the discoverer of a new truth, or the inventor of a new machine or implement, has frequently been deemed a sufficient offence to place a man beyond the pale of the common courtesies of life; and in proportion to the importance of the invention or discovery, has been the degree of chastisement inflicted upon the offender. Happy if he escaped with no more serious annoyance than the sneers, the ridicule, or the incredulous pity of mankind. Many have fared worse than this. To be in advance of the age, is a crime that the world is slow to overlook.

The telescope and microscope were once stigmatized as "atheistical inventions, which perverted our organ of sight, and made everything appear in a false light." The establishment of the Royal Society in England was opposed because it was asserted that "experimental philosophy was subversive of the Christian faith;" and this prejudice against learning has not died out, even in our day. Less than fifty years ago, there was an anti-vaccination society in England, which denounced Jenner's discovery as "the cruel, despotic tyranny of forcing cow-pox misery on the innocent babes of the poor—a gross violation of religion, morality, law, and humanity." Learned men gravely printed statements that vaccinated children became "ox-faced," and that abscesses broke out to "indicate sprouting horns," that the countenances were gradually "transmuted into the visage of a cow, the voice into the bellowing of bulls"—that the character underwent "strange mutations, from quadrupedan sympathy." The influence of religion was called in to strengthen the prejudices of ignorance, and the operation was denounced from the pulpit as "diabolical," as a "tempting of God's providence, and therefore a heinous crime;" and its abettors were charged with sorcery and atheism.

When coal was first introduced into use as fuel in Great Britain, the prejudice against it was so strong that the Commons petitioned to the Crown to prohibit the "noxious" fuel. A royal proclamation having failed to abate the growing nuisance, a commission was issued to ascertain who burnt the coal within the city and its neighborhood, and to punish them by fine for the first offence, and by demolition of their furnaces if they persisted in transgression. A law was at length passed, making it a capital offence to burn coal within the city of London, and only permitting it to be used in the forges in the vicinity. It took three centuries entirely to efface this prejudice. What would England be, now, without its inexhaustible coal fields?

The project of uniting the Atlantic and Pacific oceans by a canal through the isthmus of Panama, has been much discussed in our day. Many objections to this scheme have been brought up; but the argument of the priest who wrote upon this very undertaking in 1588, would not probably occur to our modern capitalists and men of enterprise. "Human power," he reasoned, "should not be allowed to cut through the strong and impenetrable bounds which God has put between the two oceans, of mountains and of iron rocks which can stand the fury of the raging seas. And, if it were possible, it would appear to me very just, that we should fear the vengeance of Heaven, for attempting to improve that which the Creator, in his almighty will and providence, has ordained from the creation of the world."

When the arrangement of fans was first introduced to assist in winnowing corn from the chaff by producing artificial currents of air, it was argued that "winds were raised by God alone, and it was irreligious in man to attempt to raise wind for himself, and by efforts of his own." One Scottish clergyman actually refused the holy communion to those of his parishioners who thus irreverently raised the "Devil's wind." When forks were first introduced into England, some preachers denounced their use "as an insult on Providence not to touch our meat with our fingers." In those times, many worthy people had great scruples about the emancipation of the negroes, because they were the descendants of Ham, on whom the curse of perpetual slavery had been pronounced. Many others pleaded against the measure for the emancipation of the Jews, that the bill was a direct attempt to controvert the will and word of God, and to revoke his sentence upon the chosen but rebellious people. This reminds us of the disinterested piety of some of our Southern brethren, who make chattels of men, because they think this is God's way of benefiting Africa.

The introduction of cotton in England was regarded as a dire calamity, and led to riot and bloodshed. Whenever distress fell upon the laboring population, it was the fashion, not more than a century ago, to attribute it to cotton. The ruin of the country, and the irretrievable misery of "millions yet unborn," were predicted over and over again, from the spinning and weaving of this article, the manufacture of which now sustains one-sixth of the population of England, and gives comfort to every nation under the sun.

When spinning jennies and power looms were first introduced into England, nothing would do with the outraged and insulted spinsters and weavers, but pulling down the factories and breaking the machines. It was thought that there was an end to labor, and nothing was left to the poor but to starve. But now, although there is more work

done in England, by the power of machinery, than all the men and women in the world could do without it, yet there is a far greater demand for operatives than there was when all the spinning and weaving were done by hand. At the time of the last census, the entire *working* population of Great Britain was estimated at four millions, while the mechanical power at work was equal to the labor of six hundred millions of men. The operative in a cotton mill to-day, superintends as much work as could have been executed by two or three hundred workmen, seventy years ago.

The planing-machine, the trip-hammer, the saw-mill, and many other mechanical contrivances, were quite as violently opposed, on their introduction; but now the world owns their value, and could not do without them. Sewing machines are at this very time encountering similar prejudice and opposition, from those who are too short-sighted to see that these little iron stitchers are in reality the friends, not the foes, of the needle-women.

The fact is, machinery has increased the demand for labor, has added to the wages and lessened the hours of toil, and has reduced the price of the necessities of life. We cannot have too much machinery, provided it is good. All efforts to block the wheels of progress, and to put a check to the onward march of the race, must prove as futile as the attempts of the Eastern monarch to shackle the restless waves of the sea.

OYSTERS.

The New Orleans *Picayune* gives the following account of the manner in which oysters are propagated:

"During the summer months, the oystermen are engaged in preparing for the winter's fishing and supply. The principal feature in this operation is the selection of banks or beds in such a situation as to secure a sufficient depth—say an average of a foot or two of water over them, without much flow, or danger of its exceeding at any time four or five feet. These beds are generally covered with a layer of shells, of from a foot to a foot and a half deep, as otherwise the oyster would spoil in the mud. The oysters from which the next produce is to be procured are then planted, with the hinge of the shell downwards, just deep enough to keep them standing firm, and about a span's length apart. In doing this, no regard is paid to the relative number or positions of the sexes. On these beds they lie, for the greater part of the time, with their shells gaping, their natural position of rest. If a foot be put on the bed, or other intrusion on them made, those nearest at once close with a hissing noise, squirting out the water as they do so; and the example is immediately followed in all directions. In a short time, their 'spat,' as the earliest form of the next breed is called, is seen floating among them, and settling either on the shells of the planted animals, or on any other object, and gradually developing into bunches of oysters, which become fit for eating in six or eight months, the beds being then thickly covered with them."

For the New England Farmer.

SMALL FARMS.

MR. EDITOR:—I find in an old Roman poet this precept to Roman farmers:

"Praise a large farm,—till a small one."

Although it was penned almost two thousand years ago, yet it applies with unabated force to American, and especially to New England farmers. There is among our tillers of the soil a passion to be large land-owners, which is prejudicial, highly prejudicial to the agricultural interest. Many begin life penniless and landless. Their first scanty earnings are spent in the purchase of land. They go on as their means increase, adding field to field until some of them may have half a township in their possession. For this object they rise early, sit up late, and eat the bread of carefulness. For this they sacrifice all improvement of themselves.

Now is there not a more excellent way? Would it not be better for land-holders to moderate their passion for land, to be content with a few acres, and spend their surplus money in the more careful tillage of those few? There would then be land in New England for all that desire it; agricultural skill would be developed, and many enterprising persons would be retained on farms through life to ennoble the pursuits of their early years, to enlighten by their instruction and example their fellow-laborers, while they are now driven to shops, to merchandize and to professional life, only to be baffled at every turn of fortune.

No one thing, at this time, is more detrimental to the farmers of New England than their propensity to till too much land. It is making whole counties poorer every year. So great has been this impoverishment that it is estimated that a thousand million of dollars are now needed to bring back the soil of the Free States to the high fertility it possessed when the Woodman's axe first felled the forests and let in the sun—and this same process must go on till we learn that first lesson in farming; that our income does not depend upon the scanty tillage of many acres, but upon the liberal tillage of a few.

There is an intimate connection between large farms and scanty crops—the earth makes just returns. She yields sparingly or bountifully, just as men deal sparingly or bountifully with her. As most men having large farms, have no capital besides their land, buildings and stock, they are not able to introduce more expensive but tried modes of culture, to make experiments or to reclaim their waste lands. When they are urged to make such and such improvements, their plea invariably is, "We cannot afford it. The best we can do is to support our families and pay our taxes. Improvement is out of the question." So they go on, year after year, in those old ways of culture by which a large part of New England soil has become so profitless.

I would suggest to these large land-holders that they turn part of their land back again into capital, and that they use that capital in tilling as they ought to till the rest. Or if they have sons, to divide a portion among them. Then they would be compelled to limit their own strength and skill to a smaller surface. Their net income would be greater, their lands would become better, the withered pasture lands would receive attention, and the

meadows, those mines of agricultural wealth, would be drained and recovered.

Oct., 1856.

A STEAM PLOW FOR THE PRAIRIES.

In the *Prairie Farmer*, Chicago, Ill., of the 10th inst., Bronson Murray proposes that a premium of \$50,000 be raised by subscription of one hundred persons, paying \$500 each, to be awarded for a perfected steam plow suited to farm use, and capable of performing the labor at an expense not greater than the average cost of performing the same work under the present system. He offers to be one of the hundred subscribers, and wishes the subscriptions secured to the Illinois State Agricultural Society, and the premium to be offered by it, under such rules as an Executive Committee may direct. He asserts that there is not a farmer who cultivates 500 acres of prairie land, but can well afford to unite in the proposed subscription. He is confident that the steam plow would long since have been invented, had the capital of mechanics been equal to their inventive genius. In this opinion we cordially agree with him. It would be a most inestimable boon to farmers on the prairies if they could plow their stubble lands quickly after the crops are removed. The benefit of the steam plow to them would be quick-plowing,—doing as much by one plow in one day, as is now done by five or six with teams, which cannot be driven beyond a certain speed. When Mr. Murray came to the prairies fourteen years ago, there were no harvesting machines in use; but he felt confident they would soon be, and this determined him in settling in Illinois. His hopes have been realized regarding harvesting machines, and we trust they will also be realized respecting a prairie steam plow. Its working expenses may be as great as plowing by present modes, but if it does the work in less time, with fewer hands, (as we understand it,) farmers will be satisfied.

At a meeting of the Farmers' Club, held at the American Institute, in this city, on the 9th inst., Judge Meigs read an account of an English farm locomotive of 16 horse power. It weighed 9 tons, was stated to move easily over soft fields, and ascend pretty steep inclines. Its inventor had spent \$50,000 in making experiments, and he was now satisfied with its performances. It draws a gang of plows with ease. Our friends in Illinois would like a steam plow of much less weight than 6 tons; it is too heavy for general use, but no doubt smaller ones on the same principle can be constructed. We are not acquainted with its peculiarities; but in our opinion, the common locomotive, with broad-faced wheels, is the principle on which to build a successful prairie steam plow.

SOMETHING NEW ABOUT BREAD.—Louis Napoleon, whom men begin to recognize as a Napoleonic sort of a man, in 1853 conceived the idea that it would be practicable to compress flour so as to diminish its bulk, and in that way facilitate its transportation, and yet not injure its quality. In July of that year an experiment was made by his command to test his views. Flour, subjected to a hydraulic pressure of 300 tons, was reduced in volume more than 24 per cent. On close examination it was found to possess all the qualities it had previous to its violent treatment. It was then put

into zinc boxes and sealed up. At the same time, other flour manufactured from the same wheat, but not compressed, was also sealed up. In October thereafter, several boxes containing both kinds of flour were opened and examined. The pressed was pronounced to be the best. Twelve months after this, in October, '54, another examination took place, and with the same result. The two kinds were then kneaded into loaves and baked. The pressed flour made the best bread. In March, '55, more of the zinc boxes were opened, and on examination the loose flour showed mouldiness, while the pressed was sweet, and retained all its qualities. Made into bread, the same differences were observable.

The Emperor has ordered experiments to be made at sea, as well as on land. Men-of-war are to take out both kinds of flour, and both are to be sent on sea voyages to hot and to cold latitudes, and examinations are to be made and recorded of the influence of climate and salt air upon each.—*Albany Journal*.

RIGHT EYED.

In a paper read before the Association for the Advancement of Science, at its recent session in Albany, Prof. John Brocklesby, of Trinity College, Hartford, Conn., gives the following as the result of a series of experiments on "visual direction:—"

"In view of these facts, I am inclined to believe that most persons, when they gaze upon a near object with both eyes open, habitually neglect the image formed by the left eye and employ that of the right to fix the visual direction—in fact, that we are right eyed. Moreover, that cases sometimes occur where the left eye is used for this purpose, and in such exceptional instances the observers may be termed left eyed. A boy shoots marbles with both eyes open, and a sportsman not unfrequently brings down his game in the same manner; but I apprehend that in both instances the aim is as truly taken as if one eye is shut; and that either the right eye or the left gives the range, while the other is passive.

"If it is true that the right eye, under the circumstances mentioned, possesses a superiority over the other, the fact would be in strict accordance with some other physiological phenomena. We are all aware of the pre-eminence which the right hand has over the left, either from habit or otherwise. How much more ready and quick it is in all its motions, being the first to advance whenever the hand is needed. So marked is this characteristic that we term expertness and activity of manipulation, dexterity. Right handedness constitutes the law, left handedness the exception. The same fact is observed in respect to the feet. In the game of foot-ball, for instance, the right foot naturally comes first into play, and is decidedly more active than the other. The superiority of one organ of vision over the other would not therefore constitute an anomaly, neither would it be surprising if the same phenomena should be found to exist in respect to one or more of the other senses.

 The Warrenton (Fauquier, Va.) *Flag* notices a decline in the prices of negroes, and says that several sold to the highest bidder on Monday, at prices ranging several hundred dollars below sums paid for the same description of servants a few weeks ago.

EXTRACTS AND REPLIES.

AN INQUIRY.

An article which was recently copied into your paper from the *Ohio Farmer*, says: "The fat of animals is, in many respects, for man, the best and cheapest of all the heat-producing articles of diet."

Now, I am not quite sure I understood the writer of the article referred to; but if by "heat-producing articles of diet," he refers exclusively to meats, then it is possible his statement may be correct. If, however, he does not mean to exclude the cereal grains—for these are heat-producing substances as well as flesh and fish, only not wholly designed to give out heat—then I shall be obliged to dissent from his opinion. It has long been known to the scientific world that bread or grain give out a sufficient quantity of heat to the system; while they nourish the body—that is a flesh-producing article—as many as six or eight times longer before they are converted into fat, or even into flesh of any kind, than they do afterward. So much for encouraging the farmer to have his cattle well fed. W. A. A.

La Grange Place, Sept. 29.

CORN OR MEAL, FOR FATTING HOGS.

Will some one who has learned which is the most profitable for swine, corn or meal, give us the result of his experience? (a.) A. A. W.

CHINESE SUGAR CANE.

Please tell us where the Chinese Sugar Cane seed can be obtained, at what cost, what soil it requires, what amount, and what kind of dressing, and if it will grow in our seasons in Maine? (b.)

Kennebunk, Me.

A. A. WELLS.

(a.) Working animals require considerable bulk in their food, while animals that are merely laying on fat, require concentrated, or highly nutritious food, and the food that is fine, and that can be the most readily assimilated, or brought into a like substance with the body, is the best. Can there be any doubt but the meal is that food?

(b.) The Chinese sugar cane has been raised the past summer in various places about Boston, and with perfect success. Our crop was planted in a spot rather unfavorable, but grew ten feet high, and has perfectly seeded. We presume that the same soil and culture that suits the Indian corn will be proper for the sugar cane. Growing, as it has in a season with us both cold and wet, it will undoubtedly flourish finely in our usually hot summers.

COVERED OR OPEN WELLS.

MR. EDITOR:—What effect does it have upon the water in wells (from fifteen to twenty feet deep) to keep them covered air-tight throughout the year; and if there is any effect, does it become injurious to its use? SOUTH DANVERS.

Oct., 1856.

WASHING MACHINES.

Speaking of Washing Machines, in answer to a recent inquiry in the *Farmer*, a correspondent says, "Try Wisner's Patent, with zinc floats. We, that is, our better half and our children, are using one

with wooden floats, and think it saves one-half the labor, washes cleaner, and with less wear to the clothes."

PLUMS.

The plum scion mentioned by me, that grew nearly 24 feet in a season, was probably the Bradshaw. I only measured what grew from April to Nov.

J. T. W.

NATIVE GRAPES.

The vine on which these grapes grew was taken from the parent vine 56 years since, and set on the west side of a ledge of rocks, and is thirty-two inches in circumference; the branches extend 130 feet upon a ledge, and would have gone much farther, if it had not been stopped. T. HASKELL.

Gloucester, 1856.

HOW TO SEND POULTRY TO MARKET.

My daily observation in the poultry market of this city, of the loss suffered by poultry-raisers for want of a little care or else want of proper knowledge, prompts me to offer a word, with the hope that some abler pen will continue the subject. It is mortifying to me to see so much good poultry sold by farmers at half-price, simply because not nicely dressed. Half-dressed, half-fattened fowls will not bring half-price. I will not attempt to describe the best method of fattening, but leaving that to others, I will say, that only a little more fat put upon a fowl after it is in bare passable order will not unfrequently double the value.

Turkeys and geese should be killed with great care to keep them from bruising themselves. A very good plan is to tie their wings, and hang them on a pole by their legs, before cutting off the head. The same may be said of other fowls.

All kinds of poultry should be "dry picked" if to be carried far to market, as they keep better if dressed in this way. If scalded, the water should be just below the boiling point. In any case be very careful not to tear the skin or rub off the cuticle (or outer skin) from the legs. After being nicely picked, wash in clean warm soap-suds, and then "plump" them—as the Jersey men call it—that is, hold them in boiling water about five seconds.

Draw back the skin and cut off the neck bone near the body, and then draw the skin over again and tie it tightly with a string. This keeps the blood from running over and disfiguring the bodies.

When all the animal heat is entirely gone, pack them in boxes of about 200 lbs., using clean rye straw, as this is less heating than other kinds. A little attention to these hints will materially increase the price and give greater satisfaction to the producer, seller, and consumer.

ISAAC EMENS, 226 Front St.

New York, Sept. 8, 1856.

American Agriculturist.

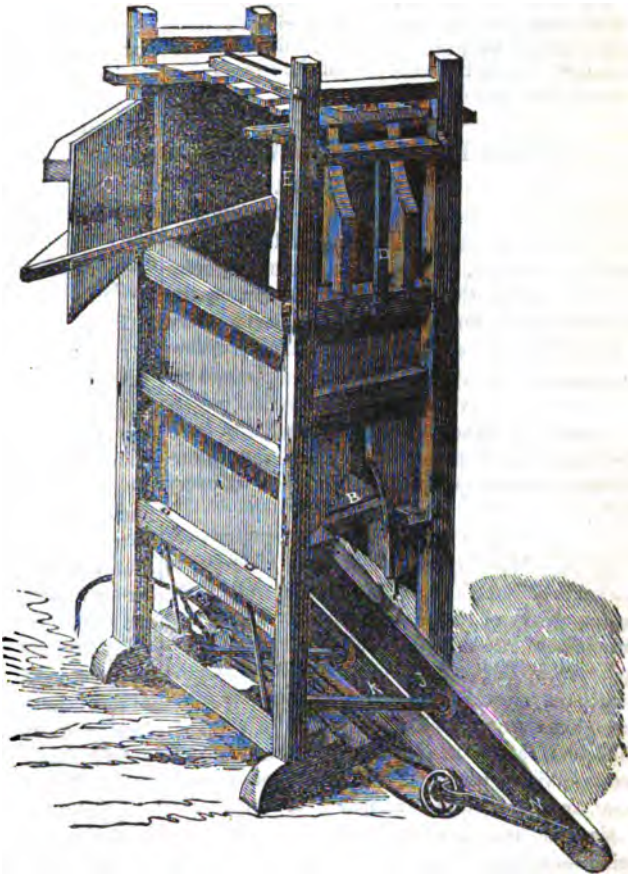
The *Andover Advertiser* says Mr. John Thompson, of Frye Village, last Spring planted two top onions. One of them split into thirteen at the root, and had ten stems with, *one hundred and forty-one* onions on the top of the stems. The other split into twelve at the root, nine stems *one hundred and forty* on the top; all the tops had seed on. The seed came from Wisconsin.

DEDERICK'S PARALLEL LEVER VERTICAL HAY PRESS.

The manufacturers say they believe this press to be, in every respect, the simplest, most compact, easiest working, most convenient and powerful hay press in the United States.

"The engraving is so plain," they continue, "that it requires scarcely any explanation. When the door, C, is closed, the head U, is moved over to either side at pleasure. The hay is then thrown in, and when the box is full the head is moved back again to the centre of the press. The power being then applied to the parallel levers, J, K, through the block and tackle system of ropes and pulleys, N, R, R, the follower, B, is pressed upward against the hay with a power which is not interfered with by the least particle of friction against the sides of the press; with a power which is as simple as it is evidently tremendous. The door, C, and also a similar door on the other side, are then opened; the bale is then bound, and the ends of it being relieved by releasing the end of the bar or handle, D, it is taken out from either side at pleasure.

"It is worthy of remark that when the bale is made, the doors of this press can be opened by a boy, standing right in front of the door, with one hand; whereas, as is well known, the doors of the other hay presses have to be pounded open with a mallet or crowbar, and when relieved will fly open with a force sufficient to break a man's leg. This press is operated by a horse upon a capstan, the horse going round on a seven or eight foot sweep only six times to make a bale. With two men and a boy it will bale, without any extra exertion, from six to nine tons per day, according to the number or size of the press. This can be readily conceived when it is considered that the time required to operate the machine to make a bale does not exceed 30 seconds; and how easily this is done by the horse may be inferred from the fact that three men upon a sweep two feet longer than that used by the horse, can press 300 lbs. into our usual dimensions—viz., 3 feet ten inches long by 22 by 28 inches on the sides—in the same time, and without any hard or extra labor whatever."



For the New England Farmer.

STATE OF MAINE POTATO—SIDE-HILL PLOW.

MR. EDITOR:—I took occasion to say, the last autumn, in a communication that I forwarded to you, that intelligent cultivators in this vicinity expressed doubts of the superlative qualities of the variety of potato called *State of Maine*; whereupon, a gentleman who professes to know all about this variety, and much about most others, queried whether I had ever seen the genuine State of Maine potato, and strongly reaffirmed its superior excellence. I am now assured by the cultivator before referred to, that he and others of his neighbors have tested this variety thoroughly the present season, and find it to fail in having those superior qualities that have been ascribed to it. That it yields many small potatoes, is quite liable to rot, and compared with other varieties they have grown is decidedly *inferior*. I am quite confident their views of it are correct.

The same gentleman informs me, that he and his neighbors are very much in favor of the *side-hill plow* on their cultivated grounds. They find

a decided benefit in the uniform level surface it leaves, avoiding those hollows usually left on the finishing of a land; also it completes the work much better at the end of furrows. In a word, he says he had rather pay the price of a side-hill plow than to use any other kind for nothing.

Our cultivators are busy in gathering in their crops, though they are not so abundant as they promised to be in the early part of the season. *

South Danvers, Sept., 1856.

LETTER FROM MR. BROWN.

Philadelphia, Oct. 7, 1856.

DEAR SIR:—The Fourth Annual Exhibition of the U. S. Agricultural Society, opened in solemn form this morning. The grounds, some forty acres in extent, are on the west side of the city, on the banks of the Schuylkill, of easy access on every side; and dotted, as they are, with noble old cedars and groups of other trees, they afford a pleasant retreat for the tired visitor when his physical powers are weary with standing, and his mental, with looking at the objects of interest about him, and answering the thousand questions put to him at every turn.

The elements, as well as all minor matters, are favorable. With a clear sky and elastic atmosphere, the spirit of success is at once infused into those having charge of the arrangements, and this is at once infused into the surrounding numbers. Upon approaching the grounds from the North or the South, the most conspicuous objects are the ornamental gateways, which are finished with much architectural taste. Inside the enclosure, the eye is greeted with a perfect city of neat wooden structures, and a miniature encampment of tents. The sheds and stalls for the oxen, horses, sheep and swine, are located principally upon the Western side and the Northern end of the grounds. Upon the green sward inside the "track," the "stand" for the judges is erected, and also the marquee of the President of the Society, and officers, and here gather the men distinguished for their knowledge and zeal in agricultural affairs. East of the track are the tents appropriated to the display of agricultural implements, and machinery, the coops of poultry, and cages of birds, which form a distinctive feature of the exhibition. On the West of the centre is the tent devoted to the show of fruits, grains, vegetables, flowers, &c., and all around these various general points are booths for private parties, tents for resting, dressing, and eating. Such are the arrangements on the grounds. Around them the country is picturesque and attractive,—the Schuylkill is spanned by a noble structure, over which pass the railroad trains, and the unceasing throng that go to and from the city. The river itself is dotted with various craft, eager in their several pursuits, and above the wire bridge which bounds the north-western end of the grounds,

are two or three steamers, constantly running a few miles up and back, passing the village of Manayunk, Laurel Hill, and giving a fine view of the scenery of the surrounding country.

The great tent for the Banquet on Friday is not yet up,—it is to stand on the green sward in the centre of the grounds, where assembled thousands, coming from every part of our widely extended country, are expected to meet in council, and speak of its most important element, the agricultural interest. The show in all the departments is fine. But night approaches, and with it many promptings to seek the quiet and retirement of my room. The receipts to-day have been about \$3,000. They must be greatly exceeded every future day during the fair to prevent loss.

SECOND DAY.

Philadelphia, Oct. 8, 1856.

Again the sun burst upon the world in its brightest splendor. Thousands of eager eyes were peering into the East in the morning, long before he had found it convenient to show his face above the horizon, but his advance beams lit up the whole Eastern world, and promised that mists and clouds should not check the festivities of the occasion.—And they did not,—for he so tempered the October air that invalids and babes came out, and grew, and gained health, and were happy in it.

My first careful visit on the grounds this morning, was to see the cattle; the number of entries is very large, and consists of Durhams, Devons, Jerseys, Ayrshires, Herefords, Natives and Grades. The *Durhams* are not so numerous nor so excellent as I expected to see; the *Devons* are numerous, and many of them very fine, half a dozen cows particularly; there is a yearling *Jersey* bull, surpassing in shape and color any I have seen; several of the cows are also very fine; the *Ayrshires*, both pure and mixed, are numerous, and some of them remarkably good. The *Herefords* were pretty well represented, having some good specimens. Some of our common, or what are called *Native* cattle, are, in form, color, temperament, and productive qualities, (as stated) as handsome as anything on the ground; there are grades, also, of all bloods, exceedingly well made and promising. On the whole, the show of cattle is interesting, but falls short of my expectations. None of the States are fairly represented. Maryland or Kentucky, single-handed, could make a finer show of *Durhams* alone, pure and grades, than the combined exhibition presents. Among the *Jerseys*, or *Alderneys*, there are exceedingly interesting specimens of the French variety, retaining most of the characteristics of that blood in size and shape, but in color entirely unique,—it being all over of a uniform mouse color; these are said to be of the best variety of the *Jersey* blood.

The *Working Oxen* and *Fat Cattle* were a cred-

it to their contributors, though not large in number; the fat cattle had a large quantity of beef steaks, which I more than once felt a disposition to discuss during my stay on the grounds. The working oxen were large and well-formed, but how well trained I had no opportunity of judging.—More Durham stock has been entered since my report yesterday, and among them is a bull by Mr. A. BELMAR, of West Chester Co., Pa., weighs 2,552 pounds, and is a finely formed animal. This department has been considerably improved to-day.

In the department of *Swine*, there are several specimens of the old, immense fellows, that occupied the ground many years ago, growing up to six hundred or a thousand pounds, with legs like those of an English draft horse, and ears that might be coveted by the farmer who lacked plank to cover his drains. They appeared healthy and exceedingly vigorous, and crossed with our fine-haired, and fine-meated Suffolks, Mackays, Essex and Berkshires, would make an exceedingly valuable variety. The display of swine is large, and it has specimens of the highest excellence, and it shows what improvement may be effected in this department of rural industry.

The show of *Sheep* is fine. That of English sheep such as Southdowns, Cotswold, Leceister, Bakewell, &c., is very large—that of the fine-wooled varieties is rather limited, but excellent in quality. DANIEL KIMBALL, of Rutland, Vt., has 20 French Merinos, GEO. CAMPBELL, of Westminster, Vt., has Spanish and Silesian, W. CHAMBERLAIN, of Red Hook, N.Y., Mr. BLAKELY, of Conn., a few Spanish. Mr. CAMPBELL has crosses of the Spanish and Silesian, which commanded much attention. I saw two Oxford Downs weighing 200 pounds each, belonging to C. A. MURPHY, of Wilmington, Del., and two Tartar sheep, or Fat Tail breed; they breed twice a year, and bring two to four at a time. The tail of one of them was some ten inches wide, about the same length, and appeared to be a mass of fat. The sheep, on the whole, made a good appearance, and attracted much attention.

The collection of *Poultry* was large, and included many specimens of great merit in all the different classes. It was well arranged, and made a point of a good deal of attraction.

In the department of *Agricultural Implements and Machines*, there is a collection which has probably never been equalled in this or any other country, as to their excellence of manufacture, and for their practical utility. There are some, to be sure, whose unyieldiness or manifest want of adaptation, excite a smile, and show how little their originators knew of the labors to be performed by them, and the general results to be secured. But they afford a fine contrast with the others around them, and enable spectators to see the progress actually made. The number of reapers and mowers is quite large,

many of them bulky, awkward, and inefficient machines. I cannot mention even a tenth of the implements that are useful and eminently adapted to the farmer's use. The large manufacturers and dealers are represented in the most creditable manner. The Messrs. Landreth, Pascall, Morris & Co., and one or two other companies of Philadelphia, and some of the Boston houses, make shows of the most attractive character. Nourse, Mason & Company, Boston, have presented seventy *Plows* of their own manufacture, no two being alike. They were taken from their common stock, and in their construction and finish represent those which they are sending out in such remarkable quantities every day from their manufactories and workshops. This part of the exhibition is eminently full, excellent and attractive, as the crowds that constantly throng it bear ample evidence. This is as it should be.

In the *Fruit and Vegetable* department, there is a fair general show, and in some particulars, strong attractions. The show of pears by Col. WILDER and MR. HOVEY, of Boston, has been rarely excelled any where. Several varieties of corn, some wheat, rye, turnips, potatoes, &c., were very fine. Some white rye weighed 60 lbs. per bushel. The corn was remarkably large, the ears being of a monstrous size.

We saw no butter or cheese—not being products of the farm, no premium was offered on them!

Mr. Langstroth's patent hive, with the bees at work, was on the ground, Mr. PHELPS was there in person with his, and his bees industriously attending to their own affairs.

THIRD DAY.

Powellton, Oct. 9, 1856.

I date and write to-day on the grounds. The weather is propitious. The morning opens gloriously, and the city is early in motion. All the world is going to Powellton. Omnibuses, hacks, carts, drays and every available vehicle utterly fail to get the people along half as fast as they desire to go. The "buss" that I got on was loaded until its ribs broke and it collapsed, squeezing two or three young ladies something more than tenderly, driving a gentleman out of the back door, and doing sundry other disagreeable things. The crowd to-day has been immense—70,000 must have visited the grounds, for the Treasurer reports the receipts to-day at \$15,000—yesterday, about \$7,000, and the first day \$3,000.

Yesterday, as I was walking among the neat stock, I met Senator Sumner, his brother, and the Rev. Mr. Furness. Mr. Sumner is much thinner than when I saw him last autumn. He told me that his bodily health is good, and he has appetite, but that any continued effort of the mind brings nervous excitement, which utterly forbids exertion at present. He chafes under this restraint as does

the noble lion in his cage. His eye flashed, and his form grew erect and trembled, as he spoke of the impending crisis in our national affairs, and of his burning desire to be again on duty. He appeared much interested in the exhibition, and conversed freely upon the merits of the various breeds before us as we passed along.

New entries of stock and implements continue to be made, so that up to this evening, there has been 428 entries of neat stock, and about the same number of horses. If the weather continues favorable to-morrow, there will undoubtedly be an increased number of visitors, and the receipts may become sufficiently ample to meet the expenses, which have been very large. To-morrow is the principal day, when the Banquet is to take place, and the great display of horses.

I shall make further note as I have opportunity.

Very truly yours,

SIMON BROWN.

Joel Nourse, Esq.

For the New England Farmer.

DRAINING WITH TILES.

BY H. F. FRENCH.

Enough has been said, and written, and observed, to convince all enlightened farmers that a great proportion of the lands in New England which prove in the end most valuable, require to be first relieved of surplus water. This is true of all our low meadows, and a great deal of upland, especially springy hill-sides.

Thorough draining with tiles is, without doubt, the cheapest and best mode of doing this, and, although I remarked in a recent article, that we have not yet arrived at the luxury of using drain tiles, I find that our farmers are resolving that they will act in this, as in other matters, on the principle that what is worth doing, is worth doing well; and will not be satisfied till the best mode of draining is adopted. To keep up with the spirit of the age, I have myself opened some hundred rods of drains, on my farm, and procured tiles all the way from Albany to lay in them. This being my first attempt, I can only speak now from observation, and the information I have gathered from men and books, on the subject. As this subject must occupy the attention of our farmers more than any other, for many years to come, it being the next great step to be taken in the march of improvement on all our old farms, it will be deemed excusable to begin at the beginning in our discussion. 'Though milk be "for babes," it cannot injure full grown men to taste it occasionally. So let us first answer

WHAT ARE DRAIN TILES?

Drain tiles are made of clay, similar to brick clay, moulded by a machine into tubes, usually fourteen inches long, and burnt in a kiln, or furnace, to be about as hard as what are called hard

burnt bricks. They are of various forms and sizes. Some are round, with a sole or flat bottom, moulded with the tile, others are horse-shoe formed, open at the bottom, to be laid on the *hard* bottom of a ditch without a sole, or in *soft* places with a sole or flat bottom, of the same material with the tile. The size varies from 1½ to 6 inches calibre, according to the quantity of water to be conveyed. It is a question of expediency, whether to use very large tiles, or to lay two or more courses of smaller size, side by side, when the flow of water is very great.

HOW ARE TILES LAID?

Trenches are opened to the requisite depth, as narrow as convenient for men to walk in. Green hands at ditching will declare they cannot trench three feet deep, without breaking the ground 2½ feet wide, but with proper tools, I have found no difficulty in going 4½ feet deep in a trench but two feet wide at top. The English books say that men who work by the rod, always open very narrow trenches. My tools are, first, a common shovel; next, a common spade, and lastly, a long-handled spade, cut down at a machine shop with shears, to 3½ inches width at the point, with a true taper from the heel, making a wedge shaped spade.—With this the ditch is finished, with just comfortable room to lay the tiles straight, and lay in a chip of brick or stone on each side, where a joint is too open. Then having laid the tiles end to end, with a true descent in the trench, commencing at the top, cover them first with something that will exclude sand, which I take to be the worst enemy to contend with. I use spent tan as a convenient and very perfect strainer. The books say turf with the grass down is commonly used. Hay, straw, or pine or hemlock boughs are also used. Having thus covered the tiles, put into the trench next that part of the earth thrown out, which lets the water pass through most readily, as sand or gravel, or in a clay soil, the top soil. It is perhaps possible with pure clay puddled in, to stop water from getting into the tiles, and no person of common judgment would put pure wet clay immediately on to the tiles. Finally, fill the trenches and make all level, making allowance for what the earth over the drain may settle. The first question that is asked by a novice in the art of draining with tiles always is,

HOW DOES THE WATER GET INTO THE TILES?

The answer is, it gets in at the joints, and through the pores of the burnt clay. Professor Mapes says that if you cork up both ends of a common drain tile, and put it under water empty, it will fill by water passing through the pores in two minutes. A Scotchman with whom I recently conversed, who is familiar with the practical operations of tile draining, said that you might stop one end of a tile, and pour in a quart of water every day in the year, and it would all go through. There need be

no fear on this point. In any soil but pure clay, you cannot keep the water out of the tiles, and it is very rarely that clay is found that cannot be thoroughly drained with them. This is no new business, and there is no need of any doubt about the facts as to the operation of tile draining.

Mr. Colman states that the Duke of Portland had completed on his immense estates seven thousand miles of drains; and that the Duke of Bedford had made two hundred miles of drains on his estates in one year! Tiles have been used extensively in parts of New York, and to some extent, in New England, but if evidence of their utility is wanted, an experiment may be referred to, tried by a neighbor of mine in Exeter, a first-rate farmer, and most reliable man.

EXPERIMENT BY MR. WILLIAM CONNER, OF
EXETER, N. H.

Mr. Conner procured 4000 drain tiles from Albany, most of them two inch, a few larger, and laid the greater part of them in 1855. His land is a hill-side, of easy descent, of a slaty soil, with a clay subsoil in part, in other parts sand and gravel. Under the most of the drained land, he found a clay bottom, at about three feet depth upon which the water from the hill above flowed along, oozing out upon the surface, and standing, in wet seasons, in little pools, and producing grass so sour and coarse that cattle would not feed upon it, and it grew up, and was mowed in the pasture where cattle were kept, for bedding. Mr. Conner put in his drains across the slope, at three rods distance apart, nearly parallel, and sixty rods long, mostly in straight lines. He carried the bottoms on a regular descent, without regard to the surface, laying none less than three feet deep, and in some instances cutting to the depth of six or seven feet, and united the whole in one main drain.

He considered it important to cut through the upper strata into the clay, to cut off the flow of water from the higher land. The general rule will be found to be different from this course in one particular. The best authorities advise ordinarily, to cut the trenches up and down, and not across the hill-side. But the course adopted by Mr. Conner seems effectual for his purpose. His drained land has not been plowed, or changed in any way, except by the drains, but so great has been the effect in a single year, of removing the cold water, that the cattle have fed the ground closely, no water standing in the holes upon the surface, even a day after a heavy fall of rain.

Mr. Conner is well pleased with his experiment, and says that he had rather have the product of the land without manure, for five years to come, than to have it, had \$75 worth of manure to the acre been applied, without draining.

He has for many years attempted to drain his fields with stone drains, and pointed out a field

where more than a hundred rods of them had been laid ten years. They answered well for a time, but of late have in part failed, and the cold water begins to do its secret work upon the crops. Like most of our best farmers, he feels the want of drain tiles, at a reasonable price.

WHY ARE TILES BETTER THAN STONE OR WOOD?

We may answer briefly, they are better, because they are more durable than any other drain, being so far as ascertained, imperishable, when properly laid. They are better, again, because mice and other vermin cannot live in them, or destroy them. They are better, because they drain more evenly than anything else. The labor of excavating is much less than for other drains, as the trenches may be very narrow. Finally, if the tiles can be obtained at the fair price of manufacturing, say \$12 per 1000, they are cheaper in the first cost than stone laying on the farm, because they are so much more cheaply laid. There are no tile works in New England that I know of, except in one town in Massachusetts, Whately, and the cost of freight from there or from Albany, where some three millions a year are made, nearly doubles the cost to us in New Hampshire.

But let there be a demand, and the supply will come. We have clay, and capital, and men, and can have tile works, whenever the farmers make known their wants. For one, I am determined to try the experiment of tile draining, though at too great a cost for profit, perhaps, on my own farm. The whole subject requires discussion. The old fogies, if a cant Congressional term is allowable, of course will declare that this country does not require draining, and that if it did, stones are best; but the young farmers who have their living to get off of land that has been skinned, will work deeper than their fathers, and a few years will show a systematic course of thorough draining with tiles, on all our good farms. It was designed, in this article, to throw out a few practical hints only.

A full discussion of the proper depth, distance, course, size, and construction of drains, would occupy our paper for months. This may suffice for the present.

THE REBECCA GRAPE.—In another column may be found an illustration and brief account of this fruit. The remarks were made by a gentleman in our office who had not seen the grape, and who, of course, could say no more than he did say. We have seen several bunches and tasted them, first at Philadelphia in company with some half dozen of the most distinguished pomologists in the country, and again in a company of some thirty gentlemen and ladies, several of whom are fine gardeners and grape growers, and the testimony, by all, was unqualified, as to its excellence. So far as our own taste is concerned, we think it equal to the Golden

Chasselas, or the Muscat of Alexandria, and that is saying much. As to its hardiness or its bearing qualities, we must, at present, rely on the declarations of others; but we have no doubt, from what we have heard, that it is *hardy and productive*. We, therefore, look upon it as a valuable acquisition to our list of fruits, and think the demand for it will be very great.

LETTER FROM MR. BROWN.

POWELTON, NEAR PHILADELPHIA, }
OCTOBER 10, 1866. }

DEAR SIR:—My last closed with the closing hour of the great show on Thursday evening. It was a day of success. The eager throng enjoyed the sunshine and the bland October air, as well as the novelties and excitements of the occasion. The mechanic had broken away from the routine of his daily labor, and with his wife and children were looking on scenes which they had never witnessed before. The professional man and student were there, with pale and anxious faces, some wondering what all the fuss might be about agriculture, a trifling and unimportant affair, which only finds people something to wear and to eat! while others, careful observers of men and things, beheld with surprise, the wonderful progress which has been made in nearly everything that relates to the farm.

Friday morning dawned upon Powelton with as much favor as any of the preceding days of the show—but the point of excitement had turned—men were becoming rational and considerate again. Still, the human current set toward Powelton. Stock men were early on the ground, and took *one more turn* to see the cows and bulls, sheep, swine, oxen, pigs and horses; fruit men clustered in the horticultural tent; poultry fanciers gabbled with the geese, while their hopeful boys imitated the young cocks, that were making their first essays in their line of music. For want of “articles of domestic manufacture” to look at, the ladies eyed and criticized each others bonnets and talmas and so-ons, and were as lovely and good-natured as the morning itself, with their clean faces and bright smiles.

Within a rifle shot of the westerly end of the grounds, are the famous Fairmount Water Works, where a row of cast iron wheels, of enormous dimensions, propel pumps which throw the water from the Schuylkill up the steep bank some 100 feet into a capacious basin, from whence, filtered and purified, it is conveyed in pipes all over the city. A dam is thrown across the river, thus leading the water into a side canal, and giving a fall of 10 or 15 feet, which affords ample power to propel the ponderous wheels that move the huge pumps, night and day, unceasingly, through the lapse of years. At the foot of the water-works nestles three or four little gems of steamers, the “Fred Graff,” “Washington,” “Wissahickon” and “Reindeer,” which ply

to and from Fairmount, Laurel Hill Cemetery, Wissahickon Falls and Manayunk. This morning, after again looking at all the departments of the show, I took a seat on the Wissahickon for an hour's recreation and respite from the crowd and confusion of the show grounds. In going up to Manayunk, only six miles, I passed under nine splendid bridges crossing the Schuylkill, noticed another over the Wissahickon, four railroads, an inclined plane, three magnificent water works, locks and canals bearing the coal in immense quantities down the river, aided by an unlimited amount of mule power, together with some surpassingly lovely scenery, greatly heightened by the variously colored foliage of the broken forests on the shore. Handsome villas crowned the receding hills, or dotted the beautiful lawns near the bank, while grazing cows and sheep enlivened and charmed the scene, perfected by the enthusiastic remarks of a sympathetic friend at my side. I passed the far-famed *Laurel Hill Cemetery*, but only caught a glimpse of some of the statuary which seemed moving among the trees, or of the circling paths hidden or revealed as the boat went on her way. The October sun of to-day has been like that of July, so that the shade of the steamer's awning and the cool breeze from the hills is grateful and refreshing. I returned to the Babel below with new vigor, and in season to join the gathering in the President's tent, preparatory to marching to the great Banquet tent.

Here an hour was spent in pleasant introductions, re-unions and renewals of old friendships. Many ladies were present, and the President of the society, with some of the Vice Presidents, glowing with enthusiasm and good-will, met and received them with an easy urbanity which soon infused itself into all. Gov. POLLOCK, of Penn., with his wife, Gov. PRICE, of N. J., and the governors of some other States, Hon. DANIEL M. BARRINGER, of N. C., late Minister to Spain, Col. KIMMEL, Vice President of the society from Maryland, Hon. JOSIAH QUINCY, Jr., of Boston, together with the Editors of many agricultural and other journals, were present.

At about 2 o'clock, a bugle blast and tattoo interrupted the conversation in the tent, and the clear voice of the President announced the order of the procession, which was then formed and marched to the Banquet. Some 3,000 sat down, and after the usual attention to the demands of appetite, the President made a short, excellent Address. He was followed by Gov. Pollock, who welcomed the vast crowd to the Key Stone State, in warm terms, Gov. Price, the venerable George Washington P. Custis, the only surviving relative of Gen. Washington, Mr. Quincy, of Boston, Mr. Congden, of New York, and many others, spoke, and uttered a good many pleasant and encouraging things. It would have pleased my ear better, had the speakers said less about *saving the Union*, and more about

grasses and grains, and cotton, rice, hemp, fruit, cattle, sheep and plows. Suppose they are vulgar things, we cannot, somehow, well get along without them. When will wise men learn that the threats and bluster about dissolving the Union are the capital of knaves and mere trading politicians, who hate a plow more than they do the works of the devil, and that this hue and cry is the motive power of their profession. The Union is safe enough. There is as much danger that all that galaxy of beauty before me two hours ago, all that noble band of mothers, shall go home and dissolve the nuptial ties which they have worn and graced so long, as that the union of these States shall be dissolved. Political adventurers can never dissolve and separate the principles and interests which bind such hearts together as gathered in the tent to-day, and then sat down to that Banquet Board. Never! The idea which it is desired the child should not receive, should not be uttered in his presence. That of disunion must be spoken only in council, on grave occasions. It is already too familiar to the young. Nothing will better tend to bind the States, than associations and gatherings like this, where hearts will touch as well as pockets, and where a thousand sharp corners will be knocked off by this national attrition. The premiums awarded by the committees were proclaimed at the table by Mr. STOCKWELL, the accomplished reporter for the Boston Journal, who did yeoman's service throughout the occasion as the private Secretary of the President, and then the big tent gave up the thousands that had thronged it but a moment before.

During my stay here, I have had opportunities of meeting old friends, and renewing friendships with gentlemen from many States of the union, and of taking by the hand several agricultural Editors whom I had not met before. At the table, in a conversation with Mr. Barringer, who I had known for many years, we spoke of the happy influences arising from this mingling of our people, and of their energy and persistence in their favorite pursuits. "Opposite us," I said, "sits a gentleman who has come to the Exhibition from the green hills of Vermont, with a flock of the fine-wooled Spanish Merino sheep, a man of energy and integrity, and who will do much to make the world better than he found it." Yes, replied Mr. Barringer, that energy is characteristic, particularly of your people at the north. While at Madrid, he continued, two Vermont gentlemen called on me for some advice, neither of whom could speak a word of Spanish or French, but yet who appeared confident and at ease everywhere; and the gentleman before us strongly resembles one of them. I called to Mr. Campbell and inquired if he had been in Spain? Yes, was the reply. Did you meet this gentleman there? pointing to Mr. B. The recognition was instant-

aneous, and the renewal of an old acquaintance, in a far distant land, was exceedingly interesting. Mr. Campbell's travelling companion was Mr. W. Chamberlain, of Red Hook, N. Y., both of whom purchased and sent home some of the best merinos we have had. Mr. Barringer, being Minister to the Court of Spain, from the U. S., was enabled to be of essential service to the sheep-purchasing Yankees, who were among a strange people *without a tongue!* He afterwards met Mr. Chamberlain in Rome. I also had a pleasant chat with Gov. Pollock, and several others, upon our agricultural interests, and *sub rosa*, a word upon some impending matters, not easily at this juncture kept down.

And so I leave the Fourth Annual Exhibition of the U. S. Agricultural Society. It has been truly National,—having representatives from the extreme portions of the Union. The utmost harmony and cordiality has prevailed throughout. The Grounds have been free from all indecencies and intoxication, and the men and women have been well clad, mannerly, and highly intelligent in their appearance, at least. President WILDER has gained golden opinions on every hand. While he has shown great powers in conceiving and executing, he has been attentive and courteous, mingling with all who participated in the Exhibition, either as exhibitors, or as visitors, unravelling the knotty questions of the one, affably leading the other into the pleasant paths of the great gathering. We know of no other man who could conceive and so successfully carry out the plan, and no one who would be willing to incur the labor and responsibilities, if he could.

As a whole, the exhibition had great merit. Much fine stock, of every kind, was presented. The horses, as I have mentioned were numerous, and many of them of great value. But the presence of the agricultural implements, the fruit, flowers, vegetables, grains, honey, and machines, made up a part which commanded undivided admiration, and which will prove of more service than any other branch of the exhibition. But, my dear sir, I shall have some fault to find with it,—with defects that should not have existed, and that are defects in the conception of the plan. But I will not mar the page with them now.

Returning, I shall pass a few days in Western Massachusetts, and then hope to see our friends again at my usual post of duty.

Very truly yours, SIMON BROWN.

Joel Nourse, Esq.

George W. Johnson, one of the large sugar planters of the Mississippi, below New Orleans, who died recently, has left an estate valued at not less than \$700,000. He has by his will manumitted all his slaves, 209 in number. They are all to be sent to Liberia in four years from his death, and each one is to be furnished with \$50.

COUNTRY SPORTS.

Among all the grateful gifts of summer, none, I think, has been deeper and more various, than the sight of the enjoyment of the children. I do pity children in a city. There is no place for them—the streets are full of bad boys, that they must not play with, and the house, of furniture that they must not touch. They are always in some body's way, or making a noise out of proper time—for the twenty-fifth hour of the day is the only time when people think children should be noisy. There is no grass for their feet, no trees for climbing, no orchards or nut-laden trees for their enterprise.

But here has been a troop of children, of three families, nine that may be called children, (without offense to any sweet fifteen,) that have had the summer before them to disport themselves as they chose. There are no ugly boys to be watched, no dangerous places to fall from, no bulls or wicked hippogriffs to chase them. They are up and fledged by breakfast, and then they are off in uncircumscribed liberty till dinner. They may go to the barn or to either of three orchards, or to either of two springs, or to grandma's, (who are the very geni of comfort and gingerbread to children.) They can build all manner of structures in wet sand, or paddle in the water, and even get their feet wet, their clothes dirty, or their pantaloons torn, without its being reckoned against them. They scuffle along the road to make a dust in the world, they chase the hens, hunt sly nests, build fires on the rocks in the pastures, and fire off Chinese crackers until they are surfeited with noise; they can run, wade, halloo, stubb their toes, lie down, climb, tumble down, with or without hurting themselves, just as much as they please. They may climb in and out of wagons, sail chips in the water-trough at the barn, fire apples from the sharpened end of a limber stick, pick up baskets full of brilliant apples in competition with the hired men, proud of being "almost men." Their hands, thank fortune, are never clean, their faces are tanned, their hair is tangled within five minutes after combing, and a button is always off somewhere. The day is a creation especially made for children. Our Noble has been at least equal to one hand and one foot extra for frolic and mischief, to each of the urchins. But grandest of all joy, highest in the scale of rapture, the last thing talked of before sleep, and the first thing remembered in the morning, is the going for *a-nutting*. O! the hunting of little baskets, the irrepressible glee, as bags and big baskets, into which little ones are to disembody, come forth! Then the departure, the father or uncle climbing the tree—"O! how high!"—the shaking of limbs, the rattle of hundreds of chestnuts, which squirrels shall never see again, the eager picking up, the merry ohs! and ouches! as nuts come plump down on their bare heads, the growing heap, the approaching dinner by the brook, on leaves yellow as gold, and in sunlight yellower still, the mysterious baskets to be opened, the cold chicken, the bread slices—ah! me! one would love to be twenty boys, or a boy twenty times over, just to experience the simple, genuine, full, unalloyed pleasure of children in a wood, with father and mother, "a-nutting!"—*H. W. Beecher.*

☞ A California pamphlet alleges, upon pretty good evidence, that five thousand murders have been committed in that country in six years.

LADIES' DEPARTMENT.

THE DYING WIFE TO HER HUSBAND.

I am passing through the waters, but a blessed shore appears;
Kneel beside me, dearest husband, let me kiss away thy tears;
Wrestle with thy grief as Jacob strove from midnight until day,
It may leave an Angel's blessing when it vanishes away.
Lay the babe upon my bosom, 'tis not long she can be there,—
See how to my heart she nestles—'tis the pearl I love to wear.
If, in after years, beside thee sits another in my chair,
Though her voice be sweeter music, and her face than mine
more fair;—
If a cherub call thee father, far more beautiful than this,
Love thy first-born, O my husband, turn not from the mother-
less.
Tell her sometimes of her mother—you may call her Anna
Jane—
Shield from her the winds of sorrow—if she errs, O, gently
blame;
Lead her sometimes where I'm sleeping, I will answer if she
calls,
And my breath will stir her ringlets, when my voice in bleas-
ing falls;
And her soft blue eye will brighten with a wonder whence it
came,
In her heart, when years pass o'er her, she will find her moth-
er's name.
I will be her right-hand angel, sealing up the good for Heaven,
Striving that the midnight watches find no misdeed unforgiven.
You will not forget me, dearest, when I'm sleeping 'neath the
sod;
O, love the babe upon my bosom as I love thee—next to God.

DOMESTIC RECEIPTS.

TO PRESERVE HERBS.—All kinds of herbs should be gathered on a dry day, just before, or while in blossom. Tie them in bundles, and suspend them in a dry, airy place, with the blossoms downwards. When perfectly dry, wrap the medicinal ones in paper, and keep them from the air. Pick off the leaves of those which are to be used in cooking, pound and sift them fine, and keep the powder in bottles, corked up tight.

TO PREVENT COLORS FROM RUNNING.—To prevent the colors from running in washing muslin dresses—take out all the gathers at the top of the sleeves and waist, quickly wash it in warm, not hot water, rinse it immediately, then roll it in a dry sheet, and let it remain till just damp enough to iron.

TO RAISE THE PILE OF VELVET WHEN PRESSED DOWN.—Cover a hot smoothing-iron with a wet cloth, and hold the velvet firmly over it; the vapor arising from it will raise the pile of the velvet with the assistance of a light whisk.

TO TAKE RUST OUT OF STEEL.—Cover the steel with sweet oil well rubbed on it; in two days use unslaked lime, finely powdered, to rub until the rust disappears. To take iron stains out of a marble chimney-piece: mix in a bottle an equal quantity of fresh spirit of vitriol and lemon juice; shake this well; wet the spots, and, in a few minutes, rub with soft linen until they disappear.

HAM TOAST.—Boil a quarter of a pound of lean ham; chop it small, with the yolk of three eggs well beaten, half an ounce of butter, two tablespoonfuls of cream, and a little cayenne. Stir it over the fire till it thickens, and spread it on hot toast with the crust cut off. Garnish with parsley.

CRANBERRY JELLY.—Make a very strong im- glass jelly; when cold, mix it with a double quantity of cranberry juice, pressed and strained; sweeten and boil it up, and make it into the desired shape, by straining in the proper vessels; use good white sugar, or the jelly will not be clear.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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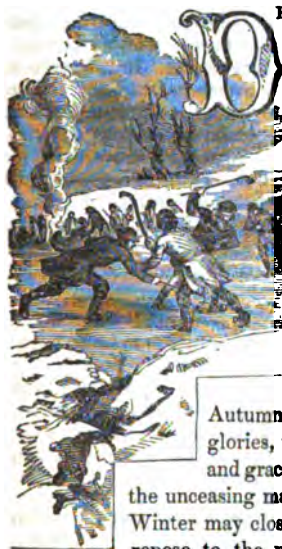
JOEL NOURSE, PROPRIETOR
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

DECEMBER'S SUGGESTIONS.

"He marks the bounds which winter may not pass,
And blunts his pointed fury; in its case,
Russet and rude, folds up the tender germ
Uninjured, with inimitable art;
And, ere one flowery season fades and dies,
Designs the blooming wonders of the next."—*Cooper*.



DECEMBER, like all the other months, comes with its own peculiar characteristics. The year has grown old,—its last sands are ebbing out, soon to be numbered with the days and months and years that have rolled away before it. The external aspects of Nature are in harmony with it.

Spring, Summer and Autumn have had, each, its glories, worn well its honors, and gracefully yielded them to the unceasing march of Time, so that Winter may close the scene, and give repose to the plants that have been

so active through all the former year.

Our thoughts and feelings partake of these characteristics of the months. When Spring bursts into life and enchantment, they are full of joy and animation and hope. The heart beats in unison with the nature around it, with the cheerful sunshine and the singing of birds, or dilates in gladness with the opening flowers. In Summer, the young hope is strengthened by the progress of the vegetable kingdom, and the heart kindles with laudable ambition, and feels strong in the glowing world that inspires it. So when Autumn perfects the plants that have been the objects of so much care, and the sunlight streams on golden grains, and fruits and ripened crops, the heart is serene,

and is pervaded by a sweet and calm content. But as Winter approaches, and the leaves fall, the flowers fade, the trees throw their naked branches to the wind, and the meadows and fields are bleak and bare, the heart falls into deep sympathy with it, and confesses that these natural periods are suggestive of a review of the past, and of resolutions of a truer future life. Our spring, and summer, and autumn, also, hasten on, on tireless wing,—our moments fly with the fleeting year, and bring us near the winter of our days; but if of days rightly lived, not a winter of discontent, but of a steady abiding love and perfection. The perfection of our being, as is the coming of winter the perfection of the plant.

Let us indulge, then, in this privilege of retrospection—each for himself, looking into his inmost heart, to examine its motives, desires and hopes, and to kindle in it a broader humanity, and new determinations of usefulness to the world.

Our connection with surrounding nature is most intimate; "it is God's air that we breathe, and God's sun that enlightens us. The graceful vicissitude of day and night, the revolutions of the seasons, marked by the regular return of summer and winter, seed-time and harvest, are all appointed by His unerring wisdom. It is His pencil that paints the flower, and His fragrance which it exhales. By His hand the fields are clothed in beauty, and caused to teem with plenty. At His command the mountains rose, the valley sank, and the plains were stretched out. His seas surround our coasts, and His winds blow, to waft to us the treasures of distant lands, and to extend the intercourse of man with man." It is in His love, only, that we can be sustained.

The more completely this thought pervades our minds, the more thoroughly shall we cultivate our affections and our fields, and approach that true life illustrated in the example of the Master while with us on earth.

This train of thought in *December*, will stimulate

us to the faithful discharge of every duty. It will better educate the children, and diffuse joy through the family circle; will tend to shelter and feed the stock, and increase our regard for it; it will have an influence to clothe the fields in beauty in their season, and finally act upon our own hearts and make them the happy recipients of a thousand pleasant impressions from the external world.

Thus, though we say little of the manual labors of this month, *December* may become to us the most important one of the twelve, fitting and preparing us for the duties of all the rest.

PROTECT YOUR TENDER PLANTS.

Great complaint was made last spring that trees, shrubs and valuable plants were injured, or killed outright, by the winter. To prevent a recurrence of such results another spring, we suggest that wherever a plant or vine can be bent over and covered with earth, that it be done. Prune *grapes* immediately, and do not be afraid of cutting away too much of last summer's growth; then take them from the trellis, lay them along the ground, and cover three or four inches with earth. All weeds, grass and leaves should be removed from them, as they afford a harbor and materials for mice to construct their nests from. Even if a grape is considered hardy, it will be benefited by this process, as the vine and buds will be plump and juicy in the spring, and will start more vigorously than if desiccated by the wind of three or four cold months.

Most raspberries, and the cultivated blackberries, will be better if treated in this manner. Take away a spade or two of earth on the side you wish to bend the plant, then lay it over carefully and cover it. *Altheas*, and other half-hardy shrubbery, may be greatly preserved by slightly protecting them with matting or straw.

TO PREVENT BUCKS FROM FIGHTING.—Formerly I annually lost several valuable bucks by fighting; some killed immediately by their necks being broken, and others would become fly-blown, or poisoned by rubbing against stumps which were overgrown with poison vines, and to prevent a lingering death, I was compelled to examine them often, and use quite an amount of oil of spike and turpentine. I now cut pieces of harness leather, and cut two holes in the upper side of each piece, and tie to each horn, which will effectually prevent them from fighting; for they cannot see each other when by their side. The expense is trifling, and will save the lives of many animals, and allow the owner to rest contented that his bucks will not harm each other. I feel induced to make this known, not only to lend a helping hand in the hour of trouble, but to serve as an answer to the many letters of inquiry, written to me in regard to the above trouble.—*J. S. Gore, Brownsville, Pa., in Albany Cultivator.*

For the New England Farmer.

MAINE STATE FAIR AT PORTLAND.

OCTOBER, 1856.

MR. EDITOR:—By way of diversity, I will give you my impressions, derived from a hasty glance at the objects exhibited, on the second and third days of the Show,—though I do not profess to be an expert in these matters.

The number of animals of every class was greater than I have been accustomed to meet at our county shows. The Durhams, and crosses with the Durhams, were more prominent than any other class; though there were good specimens of the Devons, the Jerseys, the Herefords, and here and there, a Yankee, or native, but not so many of them as I should have liked to have seen. Why is it, that farmers hesitate to bring forward their best specimens of *New England stock*? Is it because they are ashamed of these animals, without a pedigree? Or is it because they will not compare favorably with animals imported, and their offspring? Give the Yankees the same feed and attention as are given to the animals imported, and then you will see whether or not they are worthy to be exhibited.

The show of working cattle was first-rate. I have never seen oxen superior to several pairs here presented. The show of horses was numerous; some of them of superior order. But I cannot stop to witness their movements, without losing the grander show of the jockies at Boston. It was ill-timed, having both these exhibitions on the same days. If I do not mistake, our friends in Maine are in want of a Col. Wilder, to give an advantageous impulse to their exhibitions. I passed through their hall for fruits, and their hall for implements, and saw many fine things; but having no one with me acquainted with their distinguished merits, I failed to appreciate their superiority to articles of the same kind seen at Boston.

On Thursday, I learned there was to be a parade of the ladies of Maine on horseback; and judging of their quality by those I met in the parlors of the city, it must have been an interesting spectacle; though I must confess, I should prefer meeting the ladies in a less conspicuous position. I cannot view them as an agricultural product; or something to be tossed about for show only. I forbear to say more—our friend Holmes will tell us about their shows.

October 25th, 1856.

ENGLISH VS. AMERICAN GIRLS.—The English girl spends more than one-half of her waking hours in physical amusements, which tend to develop and invigorate and ripen the bodily powers. She rides, walks, drives, rows upon the water, runs, dances, plays, sings, jumps the rope, throws the ball, hurls the quoit, draws the bow, keeps up the shuttlecock—and all this without having it pressed forever upon her mind that she is thereby wasting her time. She does this every day until it becomes a habit which she will follow up through life. Her frame, as a natural consequence, is larger, her muscular system better developed, her nervous system in better subordination, her strength more enduring, and the whole tone of her mind healthier.

For the New England Farmer.

"WANTED—LESS LAND OR MORE LABOR."

BY PROF. J. A. NASH.

This is the title of an excellent article in a late number of "*Moore's Rural New-Yorker*." Is it true, that we want less land or more labor? and if so, which will be best, to diminish the land, or to increase the labor?

Uncultivated land produces *as much* as cultivated, perhaps more. The same sun shines upon it; the same rains water it; the same atmosphere embosoms it. It is the nature of land to be always producing; it *will* produce *something*. An acre in Massachusetts produced more wood three hundred years ago, than it does corn now. It happened that wood was worth nothing then; there was no market for it. An acre on the Rocky Mountains produces as much now. But whom does it benefit?

The province of agriculture is to make the acres produce the greatest value at the time and place; or, if not the greatest value absolutely, the greatest value above the cost of production, or the greatest profit. It would be a great piece of folly for a shoemaker to build a shop a hundred feet long, and then do in it only the work which he could do with his own hands. The interest on the outlay would more than balance the income. It would be possible for a farmer to make as unwise a distribution of his capital. If he should hold a hundred acres of high-priced, arable land, and do no more work on it than he could do with his own hands, the case would be similar. The long shop would be dead capital, because not in use; and the farm would be dead capital, half dead at least, because he could not possibly draw out its capabilities.—There is a proportion to be observed between the fixed and the floating capital in every business. You will not catch a shrewd merchant, in Broadway, or in Washington Street, laying out all the money he can raise in a fine store, nor in the store and the goods to fill it. He reserves something to hire clerks with. Is there any reason why the farmer should invest everything in land, implements, and stock, and leave nothing with which to hire labor?

A thousand acres of land, with no labor at all on it, would produce some game, some fish, if there were streams on it, some wild fruits and berries, and possibly, some roots, that would serve to prolong life, in case of extreme hunger. A native, with his squaw and papooses, might possibly eke a living from it. This would be an extreme case.—Let us look at the opposite extreme. If a thousand strong men were to work on these acres, one man to each acre, the whole would soon be cleared; the rocks would be worked into walls, or so disposed of as not to impede cultivation; the wet portions would be underdrained; portions admitting it would be put under irrigation; the soils on different portions of it would be mixed, by putting clay upon sands, and sand upon clays; the whole would be securely fenced, and every acre would be like a garden. Instead of feeding one lone family, it would now give food for a population of ten thousand persons. But all this might not be profitable. A thousand dollars a day would be a large sum to pay for labor.

These are the extremes. The golden mean is somewhere between; and, depend upon it, it is not

very near either extreme. Not a few are managing as if they thought it in the very neighborhood of the first mentioned. If they would not invest the last penny in land, and nothing in labor, they would come as near to it as possible. Others may be running too near the other extreme—paying too much for labor in proportion to the land they cultivate; reclaiming their waste lands faster than is profitable, and cultivating larger crops than they can afford; for all this is possible; and if any one knows of a well attested case of the kind, he would do well to report it, that the errant farmer, whose reclaimed land and large crops are likely to prove ruinous, may have a guardian put over him in time.

Our fathers paid fifty cents for a yard of India cotton, in butter at ten cents a pound; fifty cents for writing a dunning letter of three lines to them, in meal at three cents a pound; and fifty cents for an English door-lock, that would make a rogue laugh, and an honest man cry, in cheese at five cents a pound, or less. No wonder *they* did not improve their farms. Their best way was to wag along as easily as they could. There was no reward for enterprise. The only wonder is how they wagged at all. If they could have bought a better yard of cotton for a quarter of a pound of butter, instead of giving five pounds for it; if they could have paid the lawyer for his short epistle, with four pounds of meal, instead of seventeen, or if they could have bought an American door-lock for some less than ten pounds of cheese, that would have kept out all manner of rogues, and their father into the bargain, they would have made all New England a garden before our day. Why will men manage their farms now just as their fathers were compelled to do under the policy of George III. and Lord North, and, it may almost be said, of Jefferson and James Madison, so far as protection to the farmer is concerned? Then it would not pay to employ labor. But will it not pay now? The price of labor is relatively lower than it was then; it takes less produce to pay a man's wages, than it ever has since the fathers landed at Plymouth. Laborers are coming in upon us, down from Canada, over from Ireland, back from the far West. Perhaps you say they are ignorant and dishonest. They are as honest as we are, which is not saying very much for them; and they will work well, if you will tell them how. It would seem as if divine Providence meant that New England should now become a *cultivated* country. Will New England farmers be true to themselves, and to the old cradle of American liberty?

Never has the encouragement for farmers to hire labor, put their land to producing, and go ahead, been as good as now. Present prices may not hold. We have a big West to compete with on the more portable items of produce. It may not be two years before they will be underselling us under our own noses. But it is not probable that we shall again have to pay five pounds of butter for a door-lock that none but a burglar would be pleased with; or seventeen pounds of veal for a yard of India cotton, too light for any purpose but for a millerite to go up in, and not strong enough to patch a mouldy cheese with. If government should do its worst, it could not bring back those times. The tariff of '47 shows no special favor to the farming interest, and yet, farmers have had pretty good times since. But how many farmers have not profited by high prices the last two years—have lost the high prices,

by having nothing to sell? And why? Not because their farms could produce nothing, but because they were not worked. The farmer himself has labored as hard as any one ought, perhaps too hard, may have broken down his courage, broken his spirit, and tamed his enterprise by too severe labor. This is sometimes the case. But what is one man in a hundred acres. The allies might about as well have sent one man to humble the Muscovite. He cannot alone amend his soils; cannot make the bad soils good ones; can but half cultivate those good by nature; can gather up no fertilizers by labor, can buy none, for he has nothing to pay with. After trying all the year to do what no mortal can—to take care of a hundred acres with his own hands, the result is, that he has broken himself down, and built up nothing, buildings no better, fences no better, land no better, and has nothing to sell to make things better with next year. If he had cultivated ten acres well, with his own hand, or if he had put through a hundred acres with the help of four men, (five men can do about as well by a hundred acres as one can with ten,) it would have been otherwise. In the first case, he might have had a little to sell; and in the latter he could have shown an improved farm at least. Land well cultivated pays better than land run over. It is true that we "want less land, or more labor"—as true as it is that you can see the nose on a man's face, after he has swallowed enough of the ardent to make it biggest at the little end.

But how are we to arrive at the end? Shall we sell a part of the land, or hire more labor? The latter, beyond all question, if circumstances favor the enterprise. "A little farm well tilled," is better in "song" than in practice. You cannot afford, for a small farm, the variety and excellence of implements that are requisite to a good and profitable production of crops. The best implements, and buildings every way ample and convenient, cheapen the cost of production in large farms, but increase it in small ones. The farmer of a few acres must be content to creep along as he can, to produce what he can at a higher cost than his neighbor on a large farm, and to live only by screwing down the wants of his family to the zero point; a course, the whole tendency of which is to degrade, instead of elevate—to give occasion to fools and fops to speak foolishly of it, to frighten sensible girls away from the rank of farmers' wives, and to make a certain class of misses, good for nothing but to be taken care of by their daddies, think farming a very *thmall builthneth*.

Tastes and predilections, and a thousand circumstances, known only to the individual himself, are to be taken into the account. It is not desirable that all should be farmers, for then there would be none to buy their produce; nor that all who are farmers, should be great farmers, for then there would not be land enough; and besides, some are bound to be small in any business, and they may as well be small farmers as anything else. If a man has no relish for the splendors of nature; if he prefers brick and mortar and fetid gutters to flowering landscapes, if his soul is unattuned to the music of a country home, if he feels no pleasure when the noble horse obeys him, when the sturdy ox looks wishfully to him for his food, and the whole tenantry of the stall rejoice at his coming, let him burrough in the city, and retail milk in the suburbs, or ribbons at the counter. Or, if he has a genius

for mechanics, let him benefit himself and the world by exercising it. Or if his genius is for commerce, let him plow the ocean, while others plow the land. Both must be vexed, in order to carry out the designs of a beneficent Providence towards our race. If an individual would be a farmer, and yet loves a quiet life, less land would of course suit him better than more labor. If he has little capital, and has not the integrity which, in a farmer, always affords a just basis for credit, or, if like some, he has not the faculty to make his integrity known to an extent that will command money at reasonable rates, then *less land* will be his best course; for farming without either capital or credit is a bad business, and will be worse as the country grows older.

But if a man is willing to take the trouble of a business life, (that of farming is not more onerous than others,) if he has money, or the basis of a character that will command it at ordinary rates; if he has cultivation, as much as consists with his being a safe man—enough to prompt him to vigorous action, to make him desirous of distinguishing himself without wronging any one, if he has a knowledge of his business, and loves it, and especially if he has what some have not, the faculty to direct the labors of others, why talk to him about less land? Let him have a thousand acres. It would be well for him and the country that he should have. Not less land, but more labor is the *want* for such a man. "A little farm well tilled," is just the thing for a farmer, who wishes to take life easy, and barely live. It is a fine thing for men who have made their fortune, and want something to recreate themselves with, in order to enjoy it the longer. No amusement is more innocent or more rational. Nothing is better adapted to prolong life, and to make its decline happy. But why should a man in the prime or meridian of life, whose trade is farming, and who loves his trade, wish to be a little farmer? Let him rather change one word in the old song, and say, "A *big* farm well tilled give me;" for, though a little farm well tilled is a good thing in many cases, better always than a great one, badly tilled, yet a large farm well tilled, the holder being master of his business, and willing to plunge into it, is better than either.

THE LAWTON BLACKBERRY, &c.

New Rochelle, July 15, 1856.

The low temperature of the past Winter was destructive to trees and plants that have hitherto survived all changes—and it is not surprising that in some localities the blackberry should be injured. I had several acres crowded with plants, and in taking up many thousand in the Spring, I in no instance found them "killed down to the ground." The extremities of the canes being the latest growth of the season, were in some cases killed, but not below the point to which I recommend cultivators of these plants to prune them. I visited the grounds of Messrs. George Seymour & Co., (which you have heretofore described,) to ascertain the effects of the cold upon their plants, and from what I saw, and from the evidence of Mr. Seymour, I am convinced that under every vicissitude of climate and variation of soils this blackberry remains true to the original and that the genuine plants are more hardy than the wild varieties, and will endure without protection the coldest climate, and all who keep the true

variety, unmixed with seedlings or the wild upright plants which abound everywhere, will give the same testimony.

When the effects of the low temperature of last Winter began to be seen upon our various hardy trees and plants, I took a stroll of several miles in this neighborhood, to examine them in different localities. The effect upon the common red cedar was very peculiar and destructive, equally so upon low or high ground. The vitality seems not only to have been destroyed, but the sap entirely dried out; sometimes a single branch, or the branches on one side, or the top only, and sometimes in a larger collection, one-half appeared to be unscathed, and the residue totally destroyed or injured as above described. But the dead or injured trees are mingled in with the healthy, without any regard to the aspect or locality.

WM. LAWTON.

—*Am. Agriculturist.*

MEMORY.

Soft as rays of sunlight, stealing
In the dying day,
Sweet as chimbes of low bells pealing
When the eve fades away;
Sad as winds at night, that moan
Through the heath o'er mountains lone;
Come the thoughts of days now gone,
On manhood's memory.

As the sunbeams from the heaven,
Hide at eve their light;
As the bells when fades the even
Peal not on the night;
As the night winds cease to sigh,
When the rain falls from the sky,
Pass the thoughts of days gone by,
From age's memory!

Yet the sunlight in the morning
Forth again shall break,
And the bells give sweet-voiced warning
To the world to wake.
Soon the winds shall freely breathe
O'er the mountain's purple heath—
But the past is lost in death—
He hath no memory.

JOHN F. WALLER, LL. D.

For the New England Farmer.

MANURING IN HILL.

The secret of success, with the farmer, is to know how to procure and apply manure. On the fertile prairies of the Mississippi Valley, the planter need not trouble himself to supply food for his plants. But in New England it is far otherwise. Without manure, nothing good can be effected. We may plow and sow, but cannot reap. Hence the importance of this subject, in all its bearings, to the cultivator.

Of applying manures, there are various modes. Farmer Oldschool says he wants the manure directly underneath the plant; therefore, in planting corn and potatoes, he "dungs in the hole."

The theory and practice of the new school goes against this mode. It advocates an equal distribution, over the whole surface, of all the nutriment intended for the crops.

We had supposed this question virtually settled; that all "book farmers," at last, admitted the correctness of the distribution theory. But we find it otherwise. In the Connecticut valley, many, and

we believe a large majority of the farmers, will continue in the old practice, and these men are ready to give a reason for the faith that is in them.

1. Having but little manure, they must economize in the use of it. They cannot afford to spade it over the whole ground, they must manure for the crop, and not for the land.

2. The plant needs artificial stimulus in the early part of the season. By placing the manure in the hill, an impulse is given, which will last through the whole course.

Not being convinced by these considerations, we will give our views of the matter. In the growth of the plant, the roots keep pace with the stalk. When the latter is mature, not an inch of ground, within a distance equal to the height of the stalk, will be void of roots or fibres, sent out in pursuit of nourishment for the plant. If there is nutriment within this range, it will be taken up and appropriated, and all the purposes of the plant served as well certainly, as if the whole were concentrated at a point, answering exactly to the nadir of the tassel.

When the seed first sends out its radicle, its fibres absorb moisture from the substances with which they come in contact. If it is a shovelful of manure, they will revel in that, for a time. But soon these porous fibres, these rootlets, become roots and take on a woody structure, which fits them to sustain the stalk with its burden.

These roots, or this portion of the roots, no longer contain absorbent vessels; and moisture and nourishment must be obtained, if at all, from abroad. A Shanghai rooster would be somewhat discommoded by having his feed placed directly under his feet. Not less so would the plant be, which has not, like the fowl, the power of locomotion. Then to concentrate all the nutriment designed for the development of the plant about the roots, in its infancy, seems to me much like giving to a horse in the morning all the grain intended for the day. Better let it be administered as needed.

Manured in the hill, the plant is unduly stimulated, during the first of the season. Consequently it lays out more work than it can perform. When rearing time comes, the strength of the plant is exhausted, or what is equivalent to it. The absorbents have wandered into a region, where there is no nutriment, consequently stalks are abundant, but ears are few. Furthermore, in manuring, regard should be had to the land, to the future crops. Manuring for the crops alone is ruinous policy, impoverishing alike to the soil and the tiller.

The teamster, who administers stimulating drinks and a goad to his horse, may secure more labor for a few hours, but many days of rest and good feeding will be required to make good what he has lost.

On a piece of land that has recently come into my possession, which was in rye last season, and corn the year before, the place of the hill may be pointed out, as easily as if the corn were now standing. Where the hills were is grass, elsewhere none. Is that good farming? Much like the policy of him, who fed his pig one day, and fasted him the next because he liked a "streak of fat, and a streak of lean."

In the use of mineral fertilizers, it may be advisable, in some cases, to make application directly to the roots of the plants, but animal and vegetable manures, and all composts, I think, should be dis-

tributed over the whole ground, and every farmer who once makes a fair trial of the spading process, will never again engage in "dunging in the hole" his corn any more than his fence posts. H.

For the New England Farmer.

THE SWALLOW FAMILY—No. 3.

BY LEANDER WETHERELL.

The next species of this interesting family is the green-blue or white bellied swallow, *Hirundo bicolor*, not very numerous over the State. It selects hollow trees, blue-bird and martin boxes, for its place for a nest, which is constructed of dry grass chiefly, being lined with feathers or soft material. It is rather quarrelsome in its habits—does not live on friendly terms with the barn swallow, frequently attacking it and taking possession of its nest. Audubon says it winters in Louisiana, in the neighborhood of the lakes and marshes in the southern part of the State. It feeds like the other swallows on insects taken on the wing. Their note is a sort of guttural chatter. They appear about the time of the barn swallows, and are very numerous about the marshes and southern shores of Long Island, where they are taken by thousands and sent to market, being considered, by gourmands, equal to snipe. They feed on wax-berry, called bay-berry also, before their departure, which is about the first of September, and become exceedingly fat. It ranges from the Gulf of Mexico to the 60th degree of north latitude.

The bank swallow, sometimes called the sand martin, *Hirundo riparia*, is gregarious in its habits, like the cliff swallow. They are usually found congregating wherever suitable places for nesting are found. Sandbanks along river banks, or where excavations have been made, are places selected for breeding. They commence two or three feet below the surface, and penetrate from two to four feet, rising a little from a horizontal line, as if they knew how to keep out the water. At the extremity of this hole, which is rounded out for it, the nest is built of dry grass, lined with feathers. Audubon says he has known one of these excavations made, and the nest built in four days, and an egg laid on the morning of the fifth day. This indicates great industry. Their note is a feeble twitter. They are very plenty on the banks of the rivers Ohio and Mississippi. They have been traced as far north as the mouth of the river Mackenzie, 68th degree of north latitude, where thousands were seen on the Fourth of July. Wilson says he has examined hundreds of these holes in the winter months, but never found a single swallow, living or torpid.

Audubon says he was delighted, in the winter of 1831, in seeing thousands of these swallows skimming over the waters, and along the rivers and inlets of East Florida. He also saw a few barn and white-bellied swallows, though fewer than about New Orleans. The bank swallow is common on the western coast of North America. The flight of this swallow is exceedingly graceful, light, firm, and of a long continuance. It is said by Audubon that they alight less frequently to rest than any other species of known birds. Like all other swallows, they drink and bathe on the wing. They flap their wings less frequently than any other of the land birds. "The wings act on the hinge formed by the carpal joint, opening and closing like the

blades of scissors." In the summer, they roost in the holes made for their nests. In Florida they roost among the tall grass. When migrating northward, they go in pairs, like the barn swallows. In preparing for the nest, both sexes, like the woodpecks, work at excavating. They lay from five to seven eggs. Both sexes sit alternately on the eggs, and engage in feeding the young. Audubon remarks that the bank swallow of Europe and America are identical.

The species called rough-winged swallows, *Hirundo serripennis*, resembling the bank-swallow, was discovered in Charleston, S. C., by the Rev. John Bachman, a name well known to students of natural history, who sent four eggs to Audubon with a letter containing the following remarks:—"Two pairs of swallows, resembling the sand-martin, have built their nests for two years in succession in the walls of an unfinished brick house at Charleston, in the holes where the scaffoldings had been placed. It is believed here that there are two species of these birds." This species is not figured in Audubon's great work. He thinks they inhabit the country west of the Rocky Mountains, in the valley of the Columbia. Little is known of its habits by ornithologists.

The purple martin, *Hirundo purpurea*, is the most redoubtable of the swallow family, as is well known to all observers of birds and their habits. Tradition says that it was not seen in New England until about the time of the Revolution. It was common in New Jersey in 1749, as mentioned by Kalm, the naturalist. This species of the swallow family seems to be on the greatest terms of intimacy with man of any of the bird tribes. This seems to be natural, for so great favorites are they considered, that houses are built especially to furnish them a home during their fashionable northern tour, to spend the summer. This is done also by those living in more southern latitudes. The slave and the Indian put up a calabash, or cane pole, at the cabin door, to furnish an abiding place for the martins, for they are great insect-destroyers. They are a little disposed to gossip, and have even been seen looking into the windows, as if to discover what's going on within. Whether this habit is natural or acquired from their living in proximity with man, is not fully settled by naturalists. The martins formerly built their nests in hollow trees, like others of their kindred.

Judge Henry, of Pennsylvania, gives some very interesting facts in the history of the martins. He says they are named as common in Chili, South America, and may be undoubtedly traced as far south as Terra del Fuego; and north as far as the 60th degree, where Hearne speaks of having seen them. He relates the following anecdote illustrative of their habits: "In 1800 I removed from Lancaster to a farm, a few miles from Harrisburg. Knowing the benefits to a farmer by having the martins about, in preventing the depredations of eagles, hawks and crows, I provided a large box and put it up in the fall. Near, and about the house were many fruit trees and much shrubbery—a fit abode for the feathered songsters which were always welcomed. About the middle of February the blue-birds came, and three pairs took possession of the nest. About the 15th of May the martins came, and a war was waged. Though the box was built for the martins, the blue-birds claimed it by right of possession, or pre-emption, as the western

squatter would say, and were victorious. The martins regularly visited the box on the middle of May for eight successive years, but always found it in possession of the blue-birds. That beautiful bird is, however, furnished with lodgings not very distant from my bed head. Their notes seem discordant, but to me they are pleasing. The industrious farmers and mechanics would do well to have boxes fixed near the apartments of their drowsy laborers. Just at the approach of dawn the martins begin to sing, and then rest a little until twilight is broken. An animated and incessant clattering now ensues, sufficient to arouse the most sleepy persons. Chanticleer is not their superior in this beneficial qualification, and far inferior in annoying birds of prey.

The martin differs from his kindred in the kind of insects selected for food. Wasps, bees, large beetles, seem his favorite game, says Wilson. They appear from the 20th of April to the 1st of May. They leave for the South about the 20th of August, says Audubon, confirmed by observation. Their habits in preparation for this are so similar to those of the barn and cliff swallows that they need not be here repeated. But if they hibernate—if these half domesticated birds descend to the bottom of lakes and ponds and mud-holes, and there remain in a state of torpidity, those about Hudson Bay, where they do not appear until May, and leave or disappear about the 1st of August, must have a long nap—say some eight or nine months, in those frozen regions. How do the advocates of this absurd doctrine account for the fact, that the martins, like others of the swallow family, are observed and traced, both north and south, on their migratory journeys?

For the New England Farmer.

"IRISH" POTATOES.

Why is the term "Irish" applied to the potato, which is notoriously a "native American?" I don't recollect ever to have seen the question answered, but it is probably owing to the manner of its introduction into this part of America. To get at the whole story we must go back some two or three hundred years, and turn to the history of England.

Ireland was subjugated to the English throne by Elizabeth, but the more difficult task of elevating the inhabitants from the degradation of semi-barbarism and reconciling them to the restraints of law and habits of industry, devolved upon the "Virgin Queen's" successor, James the first. Though this Scotch successor compared rather poorly as a sovereign, with Elizabeth, still his policy toward Ireland was wise and successful. Immense portions of the north of Ireland had become forfeited to the crown, and in order to introduce the arts of civilization and prosperity, a company was formed in London for the purpose of planting colonies on the crown lands of Ireland. Among the colonies sent out, was one of Scotch presbyterians, who were regarded with especial favor by James. They settled near the town of Londonderry, and by their frugality, industry and enterprise, they soon surrounded themselves with all the blessings and comforts of prosperity and thrift. But under Charles the First, and afterward under James the Second, Catholicism gained the ascendancy, and Protestant prosperity was at an end. Anarchy and rapine were abroad, and it was with the utmost difficulty that

protestantism held a foothold in Ireland. The siege of Londonderry has hardly a parallel in history. After the overthrow of the Catholic power by William of Orange, the descendants of the Scotch colonists almost unanimously determined not to remain where they had suffered so much, and abandoning Ireland, they set sail in five ships for America. On the 14th of October, 1718, one hundred families of them landed in Boston. Seventy other families landed at Casco, on the coast of Maine. Though a township was granted to the emigrants by the General Court of Massachusetts, by whom the character of the emigrants was probably understood, still the colonists generally knew no difference between these and others from Ireland, and called them all "Irish," an epithet which was particularly odious to these emigrants. They finally selected as the location of their grant, a township above Haverhill, now within the limits of New Hampshire, then known as Nutfield, but which the emigrants changed to Londonderry, after the name of the place where many of them had lived in Ireland, and where some of them had suffered all the horrors of a most terrible siege.

It was these Scotch Irish emigrants that introduced the cultivation of potatoes into this country, and from them, probably, obtained the prefix "Irish." The first potatoes ever cultivated here were planted in the garden of Nathaniel Walker, in Andover, of this State.*

Very truly yours, ICHABOD HOR.

* Sir Belknap's Hist. N. H., p. 193, Farmer's edition.

INCREASED DURATION OF LIFE.—Professor Buchanan, in an lecture before the Mechanics' Institute of Cincinnati, makes the following observations upon the average duration of life, the effect in part of the improvements in medical science. He says that in the latter part of the sixteenth century, one-half of all that were born died under five years of age, and the average longevity of the whole population was but 18 years. In the 17th century, one-half of the population died under twelve. But in the first sixty years of the 18th century, one-half of the population lived over 27 years. In the latter forty years, one-half exceeded thirty-two years of age. At the beginning of the present century, one-half exceeded forty years, and from 1838 to 1845 one-half exceeded forty-three. The average longevity at these successive periods has been increased from 18 years in the 16th century, up to 43.7 by our last reports.

APPLES FOR EXPORT.—Owing to the failure of the apple crop in Europe, there is a large demand here for exportation, and at least 10,000 barrels of Newtown pippins, embracing the best of the crop, will be sent out this fall. One firm here has already contracts for England to the amount of 6,000 barrels. This variety of apples has the preference over all others, though Baldwins and Russets are exported to some extent. Shipments this year have commenced early; and all the first quality fruit received in this market up to the 1st of December, of the varieties mentioned, will be readily purchased, to send off.—*N. Y. Journal of Commerce.*

☞ The fall of rain in England the last week in September, was greater than in any corresponding period for fourteen years.



A SIDE-HILL COTTAGE.

We present this week another of the beautiful designs of Messrs. Cleveland and Backus Brothers, of New York. They cannot fail to afford important suggestions to many who are about to build in the extensive circle of our readers.

"Our second hill-side plan is meant for a position below the road. The principal front is therefore on the higher side. Such a situation has usually less of descent and abruptness than those to which the former design is suited. Gentle swells by some valley side, or on the outer margin of a plain, often furnish sites well adapted to this plan.

The internal arrangement, as shown by the plan, needs but little explanation. The windows opening on the verandah and on the small balcony at the end, are long, and are hung on hinges. The

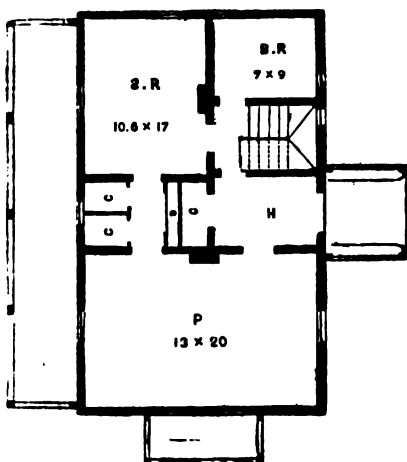
basement has a fuel cellar, F, a vegetable cellar, V C, a closet, C, and the important rooms, L R, and K. In the attic plan there are four bedrooms and as many closets. These rooms are ten feet high in the highest part, but two feet and nine inches at the side; a result which is due to the lower pitched roof. The stairs are of a compact form, and occupy but little space.

The position of the upper flight determines that of the lower, and makes necessary the recess in the stone wall as shown by the basement plan. Where so close a calculation is required, as in this case, a small alteration in one part of a staircase without a corresponding change in some other, may just spoil the whole thing. Indeed, few changes in a plan are safe, or likely to be successful, unless they are considered with minute and judicious reference to their bearing on every other part; and this is about equal to original planning—a thing more easily talked of than done. This point has been alluded to already, but it is so important that we venture to give line upon line.

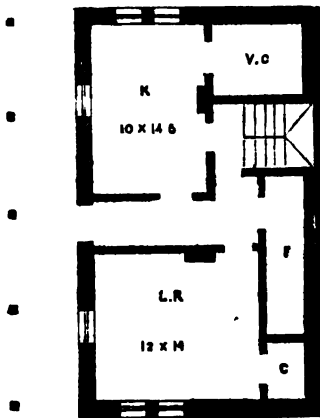
The position, on the whole, most eligible for this house is one in which its shaded side should face the west, and its parlor windows look out upon the south. The road might wind round its southern end, with a sufficient space between for shrubbery and lawn, while the garden might stretch down toward the vale.

Upright boarding is the proper covering for the sides of this building, though clapboards might be used, if specially preferred. But there are some objections to this once almost universal mode of covering wooden walls, and we may as well state them here.

In the first place, clapboards form a sort of horizontal ruling, and it is a well-known effect of such ruling that it shortens and flattens, to the eye, the surfaces on which it is laid. Now this result is directly the reverse of what is often intended, and



PRINCIPAL FLOOR PLAN.



BASEMENT PLAN.

should still oftener be aimed at in architectural designs.

The second objection is connected with questions of light and shade. The strength and character of a building depend almost wholly on the shadows which are thrown upon its surface by projecting members. A structure without projections has no character at all. It is blank and meaningless, just as a human face would be without lips and nose and eyebrows. The horizontal ruling of the clapboards, being itself a species of shading, not unlike the parallel lines of an engraving, cannot but weaken the power of the other shadows,—thus impairing, if not neutralising, this part of the effect intended by projecting eaves, canopies, and sills.

A third objection to clapboards rests on the fact, that when they are used, the trimmings are first attached and the boards then fitted to them. This increases the expense, as well as the chances of imperfect work. The reverse happens with plain boarding. The first coat of thin clapboards is about the same as that of thick upright boarding without battens. In durability and warmth the former is decidedly inferior.

To balance all this the clapboard possesses one advantage, and that is the power derived from old habits and early associations. But this power is growing weaker every day.

Height of basement, 7 feet. Main story, 8 feet 6 inches. Cost, as in the last design, \$1,375."

IMPORTANT, IF TRUE.—*To secure from cattle male or female progeny at will.*—According to an article in the *Annals of the Luxemburg Agricultural Society*, communicated by a Belgian farmer, a heifer calf is invariably produced when the cow is put to bull before milking, and a male calf when the cow is put to bull just after she has been thoroughly milked. The author of this statement claims to have confirmed its accuracy by four years experience, and asserts that the plan has succeeded beyond all expectation. Cows, which previously had borne only male calves, and that for four or five years, gave heifer calves by the above treatment. Give it a trial.—*Country Gentleman.*

REMARKS.—This has long been stated by Mr. FRENCH, of Braintree, this State, who raises some of the finest cattle among us, and who is a careful observer of this and similar phenomena.

For the New England Farmer.

PORTRAITS FROM THE FIELD AND FARM-YARD.

BY WILSON FLAGG.

No. 5—THE WOOD THRUSH, (*Turdus Melodius.*)

"Most musical, Most melancholy."—Milton.

The wood thrush is one of the most remarkable songsters of the American forest. He is about the size of a blue-bird, and resembles in plumage the red thrush, except that the brown of his back is lighter and slightly tinged with olive. He arrives early in May, and is first heard to sing during some part of the second week of that month, about the same time with the bobolink and the golden robin. Unlike them, he is not one of our familiar birds; and unless our dwelling-house is in close proximity to a wild wood, we should never hear his voice from our doors and windows. He sings neither in the park nor in the garden; he shuns the exhibitions of art, and reserves his wild notes for the ears of those who frequent the inner sanctuary of the groves. All who have once become familiar with his song await his arrival with impatience, and take note of his silence in midsummer with regret. Until this little bird has arrived, I always feel as an audience do at a concert, before the chief singer has made her appearance, while the other performers are vainly endeavoring to soothe them by their inferior strains.

This bird is more retiring than any other singing bird, except the hermit-thrush, being heard only in deep woods that remain in their primitive state, and usually in the vicinity of a pond or a stream. Here, where few other birds are in the habit of singing, he pours forth his brilliant and melancholy strains with a peculiar cadence, and fills the whole forest with sound. It seems as if the echoes were delighted with his notes, and took pleasure in passing them round, with multiplied reverberations. I am confident this bird refrains from singing, when others are the most vociferous, from the pleasure he feels, either in listening to his own notes, or to the melodious responses which others of his own kindred repeat in different parts of the wood. Hence he chooses the early evening for his vocal hour, when the little chattering birds are mostly silent, that their voices may not clash with his more harmonious lays. At this hour, during a period of about nine weeks, he charms the evening with his strains, and often prolongs them in still weather till after dark, and whispers them sweetly into the ear of night.

No other bird of his size has more strength of voice; but his song, though loud, is modulated with such a sweet and flowing cadence, that it comes to the ear with all the mellowness of the softest music. It would be difficult to describe his song. It seems at first to be wanting in variety. I was long of this opinion; though I was puzzled to explain, on this ground, its pleasing and extraordinary effect upon the mind of the listener. The song of the wood thrush consists of five distinct strains or bars. By carefully analyzing these notes, I think I have ascertained that the whole series has a compass of about two octaves. They might perhaps be represented on the musical staff, by commencing the first strain on D above the staff, and running down with a series of rapid notes to G, one-fifth below; the second, third, fourth and fifth strains are

repetitions of the first, except that each is two or three tones lower than the preceding, the last ending at least two octaves lower than the commencing note of the song.

Were one to attempt to perform these notes with a whistle adapted to the purpose, he would probably fail, from the impossibility of imitating the peculiar trilling sound which the bird makes, especially at the conclusion of each strain. The whole is warbled in such a manner as to produce upon the ear the effect of harmony. It seems as if one heard two or three concordant notes at the same moment. I have never noticed this effect in the song of any other bird. I should judge that it might be produced by the rapid descent from the commencing note of his strain, to the last note a fifth below, the latter being distinctly heard, simultaneously with the reverberation of the first note.

Another remarkable quality of his song is the union of brilliancy and plaintiveness. The first effect is produced by the commencing notes of each strain, which are sudden and on a high key; the second by the graceful chromatic slide to a fifth below, with a termination that is inimitable and exceedingly solemn. I have sometimes thought that a part of the delightful effect of these notes might be attributable to the deep woods in which they are uttered. But I have occasionally heard them, while the bird was singing from a solitary tree in an open field, where they were equally pleasing and impressive. I am not peculiar in my admiration of this little bird. Audubon declares his preference for it, and considers it the finest singer of the groves; and I have observed that people who are strangers to the woods, and to the notes of birds, are always attracted by the song of the wood thrush.

In my early days, when I was at school, I boarded in a house adjoining a grove that was vocal with wood thrushes; and it was there I learned to love that song more than any other sound in nature, and above the finest strains of artificial music. Since that time I have lived in town, apart from these sylvan solitudes, which I have visited only during my hours of leisure. But I have seldom failed on each returning year, to make frequent visits to the wood, to listen to these notes, which caress a full half of the pleasure I derive from a summer walk. If on any year, I fail to hear the song of the wood thrush, I feel a sense of regret, as when I have missed an opportunity to see an absent friend, during a periodical visit.

For a year past, I have lived near a grove that is frequented by wood thrushes, and in May I often walk to this wood in the evening to listen to their concerts. I was ill and confined at home during all the month of June, and did not go abroad until near the middle of July. At length I took one of my accustomed walks, and listened for the notes of the wood thrush. As I looked around I perceived that the wild roses had mostly dropped from their stems; the asclepias and the red summer lilies were in bloom, and on all sides were the evidences that the time of the singing birds was drawing near to a close. I listened and waited long; but his voice was not to be heard. The sweetest singer of the groves, the philomel of our pleasant summer evenings was silent, and a sadness seemed to pervade all the woodland solitude. The ground-robin still uttered his monotonous ditty, the grass-finch sang his familiar notes from the fences in the mowing fields, and the little wood-sparrow,

with his delightful pensive warble, was more vocal than ever in the wild whortleberry pastures. But not all these could compensate for the silence of the wood thrush. When I perceived that this little bird was silent, I felt more keenly sensible of the time I had lost by my illness, and of the rapid flight of the pleasant summer months.

As may be inferred by the reader, the wood thrush is not one of our latest singers. His notes are not often heard after the middle of July, though the hermit thrush, an allied species, sometimes sings as late as the middle of August. The notes of this bird are hardly less remarkable than those of the wood thrush; and they would undoubtedly produce as powerful an effect upon the listener, were it not for the long pauses between the different strains, which if they followed each other immediately, would be unrivalled by the notes of any bird in existence. But I must reserve the hermit thrush for another sketch.

Note.—I have seldom read any thing with so much pleasure as the communication of Mr. Charles S. Paine, respecting certain peculiarities in the singing habits of the song-sparrow. I think he is truly entitled to the reputation of a discoverer; for it is not probable that the fact which he stated has been observed by any other person. I have always noticed that the song-sparrow varied his notes, but never suspected that he sang through a regular series of variations. Since I read Mr. Paine's communication, I have made an attempt to transcribe the notes of this bird upon the musical staff, and have made out five distinct tones, and I have no doubt I shall succeed in completing the seven. I have tested the truth of Mr. P.'s assertion to my own satisfaction; and while making my observations, I was surprised at the near approach in the notes of the song-sparrow to accuracy in time, and in musical intervals. It seems to me that his strains are mostly in triple time, a few in common time, with an occasional blending of both. The song consists usually of four strains, occasionally lengthened to five, while the song is frequently terminated at the end of the third strain. This habit of varying his notes through so many permutations, and the singularly fine intonations of many of them, entitle the song-sparrow to a very high rank as a singing bird. I hope Mr. Paine, who is evidently a keen and original observer, will favor the public with more of his observations.

For the New England Farmer.

WHAT BRINGS THE CLOVER ?

MR. EDITOR :—In a recent number of the *Farmer*, I notice an article in which is the question, "Where have the clovers come from?" and the question seems to be yet open for discussion.

There is no doubt but that this has been an extraordinary year for the production of clover.—Some of our fields have yielded two crops this season, and there is a good growth standing. One field which we never plow, owing to its liability to wash, and which seldom produced clover, this year was covered with a fine crop, and every farm in this region has been more than usually prolific in the production of clover.

One theory presented as to the cause of this is, that it is owing to the effects of previous droughts, which cause the moisture to rise from below, bring-

ing with it various minerals adapted to the growth of clover. If this is the reason, why is it that its effects cannot be seen on other crops? A few advance the opinion that "the produce of clover is usually very great, after a severe winter, and inferior after a mild winter." Last fall the ground did not freeze very hard before it was covered with snow, which remained on until spring. Owing to the porous nature of snow it is a very bad conductor of caloric, and when the ground is thoroughly mulched with it, it is kept at a uniform rate of temperature.

Now it appears to me that the extra quantity of clover this season is owing to the protecting influence of the deep snows of last winter. It is well known that clover does not succeed so well when sown in fall as when sown in spring, yet I think it would, if protected by deep snow. I have conversed with several intelligent farmers on this subject, and they concur in this opinion, yet it may be error.

J. S. C.

Uxbridge, October, 1856.

For the New England Farmer.

HORSE RACING AT CATTLE SHOWS.

MR. EDITOR:—In your last paper you alluded to the subject of trotting horses at our cattle shows. You remarked that "great dissatisfaction has already grown up in consequence of this, and it is rapidly increasing." You assign three reasons for this dissatisfaction—the exciting nature—and demoralizing tendency, real or supposed, of these trials of horse speed—the overshadowing by them of other departments of the cattle show, and the changing by this means of the whole affair from its original purposes.

I believe you are right, Mr. Editor, and for one, I am truly glad that you have the courage to come out with your honest convictions on the subject.—The truth is, this practice of connecting horse trotting with our cattle shows has sprung up so suddenly, that the sober thoughts of the community have not been heard or consulted respecting it. But depend upon it there is a deep and strong ground-swell of public opinion under the apparent popular current, which will, ere long, make itself felt in the management of our cattle shows and the legislative aid afforded to them. The majority of the sober-minded farmers, and the staid people generally of Massachusetts, will not encourage cattle shows, nor consent that the State, by her bounty, shall encourage them, if they are to become, in fact, only a sort of licensed horse-racing.

The professed object of our agricultural societies is to promote the cause and the interests of agriculture, and cattle shows are one of the many adopted for this purpose. Premiums are offered, and the State furnishes a part of the funds, for the encouragement of excellence in the several departments of husbandry. But is the trial of the speed of horses—and on a race track—a legitimate object of such encouragement? Is the speed of horses a matter in which farmers are specially interested, and is it essential to advancement in the practice of agriculture? Farmers must have horses, but they do not need fast horses, they want only farm horses—work horses, such horses as are adapted to their purposes—and surely the fancy fast horses are the very last animals they would accept, even as a gift, if they were obliged to keep and drive them.

It is a very different class of men that require such horses, and perhaps, it may be said that farmers should therefore raise them to supply this demand. Not so, as I humbly conceive. Let it first be shown that raising fast horses, is a profitable business in our State, before it can be recommended to our farmers. But even if it were so, it would not follow, by any means, that it should be made a special object of encouragement by our agricultural societies, and that race-courses should be established on our show grounds, to test the merits of such horses. There may be so many counterbalancing evils as to render such a practice very undesirable. And these evils are, in fact, now beginning to develop themselves, as you have pointed out in the last *New England Farmer*.

True, the advocates of horse-racing deny the existence of these evils, or rather contend that what, by some, are considered evils, are not such in reality, that it is only prejudice, and conservative notions that make up their judgments. But who is to decide upon this question? The majority, of course, and it may safely be left to the intelligent, moral and sober minded men of Massachusetts, who constitute a large majority of the people, to render this verdict on the subject.

But, say the advocates of horse-racing, strike out this trial of horse speed from your cattle shows, and you make them far less attractive, and the receipts for admission are consequently diminished. Suppose this to follow—which may well be doubted—what then? Are cattle shows to be mere amusements to call crowds together? You can get men together in a cheaper way, if that is all, but certainly, this was never contemplated by the founders of cattle shows. They had a higher and more useful object in view, and it would be well, were it still kept in view. As to making money out of a cattle show, by horse racing, why not then introduce other sports, or trials—a foot-race by young men, or climbing a greased pole—and thus go in for a greater swelling still of the receipts of the show grounds?

But I leave the subject, only hoping that attention may be directed to it by the managers of our agricultural societies, before they become ultimately diverted and perverted from the true objects of such institutions.

PEQUOD.

THE YOUNG MAN'S LEISURE.

Young man! after the duties of the day are over, how do you spend your evenings? When business is dull, and leaves at your disposal many unoccupied hours, what disposition do you make of them? I have known and now know, many young men, who, if they devoted to any scientific, or professional pursuits, the time they spend in games of chance, and lounging in bed, might rise to any eminence. You have all read of the sexton's son who became a fine astronomer by spending a short time every evening in gazing at the stars after ringing the bell for nine o'clock. Sir Wm. Phipps, who at the age of forty-five had attained the order of knighthood, and the office of High Sheriff of New England, and Governor of Massachusetts, learned to read and write after his eighteenth year, of a ship-carpenter in Boston. Wm. Gifford, the great editor of the *Quarterly*, was an apprentice to a shoemaker, and spent his leisure hours in study. And because he had neither pen nor paper, slate nor pencil, he

wrought out his problems on smooth leather, with a blunt awl.

David Rittenhouse, the American Astronomer, when a plough-boy, was observed to have covered his plough and fences with figures and calculations. James Ferguson, the great Scotch astronomer, learned to read by himself, and mastered the elements of astronomy whilst a shepherd's boy in the fields by night. And perhaps it is not too much to say that if the hours wasted in idle company, in conversation at the tavern, were only spent in the pursuit of knowledge, the dullest apprentice at any of our shops might become an intelligent member of society, and a fit person for most of our civil offices. By such a course, the rough covering of many a youth is laid aside; and their ideas, instead of being confined to local subjects and technicalities, might range the wide fields of creation; and other stars from among the young men of this city might be added to the list of worthies that are gilding our country with bright yet mellow light.—*Rev. Dr. Murray.*

For the New England Farmer.

FESTIVAL AT NEWBURYPORT, OCTOBER 2, 1856.

It was my privilege to witness the 36th Exhibition, by this time-honored association. and I hesitate not to say, it was one of the most successful ever witnessed in the county. All praise is due to the energy and industry that displayed such an abundance of choice fruits and products as were seen by thousands in the City Hall. Notwithstanding the season is reported to have been unfavorable to such products, no one would have suspected this, from the appearance of the tables. The competition in the plowing field was well sustained. About thirty teams were engaged, with every form of plow of approved structure. Among these, there was no one that finished the work so entirely to my satisfaction, as that which is denominated the *side-hill plow*. This leaves the surface of the field uniform, without the awkwardness of dead furrows.

The show of animals in the place was about the same in number as in years past,—but of superior quality. There was a bull, owned by Mr. ROGERS, of South Danvers, which, I thought a very superior animal. Many of the young animals were very promising. Of the milch cows, I could form no opinion—not being informed of their products; having often found the worst looking animals to be the best producers of milk.

The collection of people was immense, showing an increasing interest in these exhibitions. More than one thousand ladies and gentlemen dined together upon the field.

The address by Mr. B. P. POOR, of Indian Hill farm, was an able and interesting performance, and will add to the high reputation of this gentleman as a scholar. As a whole, the occasion passed to the general satisfaction of all concerned; notwithstanding the murmurs of a few growlers at the delay in starting the plows, which cut short the speeches at the table. This society has paid out more than \$600 a year in premiums, and now has a permanent fund of more than \$10,000 well invested on interest. Its published transactions have been among the most instructive lessons distributed among the farmers. For these great credit is due the faithful and intelligent Secretary.

For the New England Farmer.

"BARBARISM."

MR. EDITOR:—I noticed a communication in your paper of August 23, under the above caption, in which the writer speaks of instances where beautiful shade trees have been sacrificed, seemingly for no other object or excuse but mere wantonness; and as I have an "additional case," I will give it.

It may be remembered by those who, a few years ago, had occasion to travel on the Concord and Cambridge turnpike, which passes through the south part of Lexington, that a large white oak tree stood on the south side of the road nearly opposite my residence, with others of smaller size in the immediate vicinity. This tree was nearly, or quite, four feet through at the base, its huge limbs branching out about ten feet from the ground, full fifty feet horizontally on all sides from the main trunk; with others extending upwards in proportion, so that any one can imagine the beauty of that noble and stately tree.

Well do I remember for many years when market days at Brighton came on Monday, large droves of cattle were driven on this road from the country, slowly wending their way for a mile or two in length; and when, on a hot and dusty day in summer, the foremost of them came to the shade of those trees, they would lie down, followed by the rest of the drove, until the road was completely blocked up by them; and the drivers would then sit upon the wall, uncover, and wipe the dust and perspiration from their faces. After having tarried an hour or two in the cooling breeze, man and beast would resume their journey. Two of these drovers of times gone by, were "Dea. Kimball," of Littleton, and a Mr. Cotting, of Vermont, doubtless old familiar names with cattle dealers in the country.

But we were not always destined to enjoy the grateful shade of that tree; for as fate would have it, it so happened that late in the year 1840, a contractor with ship-builders in Medford came along, and noticing the tree, he inquired for, and sought out the owner, who was one of my neighbors, and thereupon commenced to bargain for the purchase of the tree. The owner at first refused to sell, but by the man's incessant importunities, he at last yielded, and about the last of January, 1850, the monarch of the forest was laid low, filling the neighborhood with the reverberating sound of its tremendous crash. I would have given the interest on its value for a number of years, if it could not have remained on any other conditions. And furthermore, if the owner had been one in needy circumstances, there would have been some excuse for it; but as he was worth his thousands, there was no necessity in so doing. It is almost impossible to find words with which to speak in just terms of condemnation, for such an outrageous act of vandalism. And it would not be too much to say, that those who have so little feeling for others, and who are so incapable of realizing the beauties of nature, might be classed with barbarians who have never seen the light of civilization. We should preserve these relics of olden times while we can, and not only that, but we should plant trees by the road-sides and about our homes, that they may, in years hence, be a source of enjoyment to the traveller and that of our children. J. UNDERWOOD.

Lexington, Sept., 1856.

RECOLLECTIONS.

During our late visit to the State Fair at Burlington, Vt., we met several gentlemen, with whom we had much pleasant conversation, and from whom we learned many useful things. On the grounds, and among the neat stock, there was a lot belonging to EZRA MEACH, Jr., of Shelburn Point, which would at once attract the attention of the visitor. This gentleman, we were informed, usually winters a hundred horses. They are turned together, late in autumn, into rich clover pastures, where they remain through the winter, without any other feed than the grass they get, and with only the shelter afforded by the woods adjacent to the pastures. In a climate like ours in any part of New England, it would seem almost incredible that horses could survive the winter in such a condition,—but several gentlemen, whose statements would command belief, assured us that they not only live under these circumstances, but that they usually come out in the spring in excellent condition!

The Hon. HARRY BRADLEY, at whose pleasant residence we spent a portion of an evening, cut this year *forty-five* acres of spring wheat, and last year had *fifty* acres of Indian corn. His crops of wheat are usually good, and afford a handsome profit.—Formerly, and for many years, he fattened *one hundred oxen annually*,—but since the railroads have opened a market at every man's door, the person who raises finds it also to his advantage to fatten and market for himself.

On the Fair grounds we also found an old acquaintance, the Hon. WINSLOW C. WATSON, of Port Kent, N. Y. Mr. Watson is one of the most industrious and best agricultural writers in the country, and he has contributed largely and usefully to our agricultural literature. His "*Survey of Essex County*," it being the county on the shore of Lake Champlain, opposite Burlington, Vt., is a volume intensely interesting, while it has the valuable qualification of being remarkably instructive. He discusses in a clear and comprehensive manner, the civil and political history of the county, its physical geography, natural history, mineralogy and geology, its industrial progress and pursuits, and agriculture.

The committee to whom Mr. Watson's report was submitted, and who recommended its publication in the transactions of the State Society, say that it is "a work abounding in facts, closely interwoven not only with the physical condition of man, but including also his social, political and commercial relations, as connected with a portion of the State of New York which may be deemed classic, because of events and actions both remarkable and interesting, carrying their influences upon our nation to the present period."

Essex county is the country of the *Adirondacs*,

presenting, perhaps, a larger extent of unbroken forest, covering mountains, hills, ravines and vales, than can be found in any other portion of the northern States. It is supposed that here are vast tracts still untrodden by civilized man, where nature reigns in primeval grandeur, and where the panther and deer, and other wild animals, still retain possession of the forest never yet trenched upon by the axe and the plow. The agricultural division of the work presents features of interest that were not expected, and exhibits a climate where the grape has flourished in profusion; the wild apple and plum cover the hill-sides, and the wild cherry forms entire groves in the fastnesses of the Adirondacs.

After a day of fatigue on the grounds of the show at Burlington, we gladly accepted an invitation to visit Mr. Watson and pass the night at his hospitable mansion, across the Lake at Port Kent. Stepping on board one of the clean and well-ordered steamers, a short hour brought us to the landing on the opposite side, and soon to a grateful cup of tea, and a most interesting conversation around the family board.

In the morning we were allowed to look at some of the numerous manuscripts and records preserved by the Hon. ELKANAH WATSON, the father of our host, and the originator of the old Berkshire Agricultural Society in our State. But we shall have occasion to speak of him, and of the author of the Survey, in another connection hereafter.

Another gentleman whom we met at this exhibition, was Col. DANIEL NEEDHAM, recently from Groton, Mass., who has left the law for the farm, and is settled at Quechee, Vt. He is an earnest, practical man, and we suggest to the managers of the Vermont Society, to draw him into their service, if they desire an efficient and able co-worker.

TONS OF BREAD.

H. Berden, says the *Journal of Commerce*, has just completed an enormous oven in Brooklyn, of a capacity almost sufficient for the supply of the whole city. *Five hundred and forty* barrels of flour can be baked every day, if the powers of the oven are put to their full test. The apparatus is purely scientific in its construction, with special reference to the preservation of the alcoholic gases and other valuable properties which are wholly lost, during fermentation, in the ordinary process of baking. While exposed to the heat, the bread is constantly in motion, on a series of revolving platforms, and finally emerges on miniature rail cars, ready for delivery. A uniform temperature is secured by a very ingenious contrivance, consisting of a strip of grass, thirty feet in length, within the oven, so as to be very sensitive to thermometrical changes; and the least shrinkage or contraction is made to act directly upon the furnace fires, by its connections with the dampers, effected by a lever. The cost of this machinery, with boilers, wells for pure water, &c., is said to be in the neighborhood of \$40,000. The plan is to furnish bakers with their

daily supplies at wholesale prices, which, it is contended, can be done at a much lower rate than they can supply themselves. So it is quite possible that a reduction in the price of bread may ensue. The wholesale price for the very best quality is fixed at 11 cents per loaf of $3\frac{1}{2}$ pounds, and $5\frac{1}{2}$ cts. for $1\frac{1}{2}$ pounds loaves—to be retailed at 6 $\frac{1}{2}$ to 12 $\frac{1}{2}$ cents. This, it is claimed, gives the public about 40 per cent. more bread, and of a better quality, than they have heretofore received. The economy of labor effected by this invention is surprising, when the number of hands employed is contrasted with the results accomplished.

For the New England Farmer.

A LETTER FROM EASTERN VERMONT.

MR. EDITOR:—I observe in the *Farmer* that you have had reports of the season and crops from almost all parts of N. England, but none, as yet, from this region. With the exception of the drought in midsummer, we have had an unusually fine season for farmers. The hay crop was much larger than last year, and is very good in quality, and some very fine wheat has been raised on our hill farms. I would like to have you eat some of the bread and butter produced here, and if you will make us a call, we will give you a chance, and I am sure you will pronounce them sweeter and more palatable than the finest flour from your city mills, and the butter sweeter than can be made from the pastures on the sea-board.

Raspberries have been very abundant, more so than for many years before; for three or four weeks our table was abundantly supplied with them from the fields and the road-side. Blackberries were scarce and inferior. The drought commenced the latter part of July; for ten or twelve days the thermometer stood 90° and upwards, with scarcely a shower to relieve the intense heat. The corn on light soil suffered much, but owing to the favorable fall a medium crop will be gathered.

There was no frost until September 27th, and then so light as to be only perceptible on the tenderest vines; the next was October 5th, and even then did not kill the tomato vines. The night of October 14th was the first severe frost, and that was hard enough to make our gardens and fields turn very pale. We have had frequent rains, and warm, sunny weather between, that has kept the grass good, and butter ought to be good and cheap, but there seems to be an effort to keep this almost necessary of life at a high price.

Our apple crop is very short; they are selling now at higher prices than have ever been known in this State before. Four dollars per barrel for winter fruit, and that not as good as usual. The trees blossomed well, but we had a great deal of cold, windy weather while the apple was forming, and this, combined with the curculio, apple-worm and rose-bug, has deprived us of our usual supply.

I see that one of your correspondents attributes the failure of the crop entirely to the curculio, and prophesies that New England will never again produce large crops of apples on account of the increase of this insect. Now this poor creature is guilty of sins enough, and deserves the "extreme penalty," if any living thing ever did, but do not let us blame him for crimes he did not commit. Now I learn that in Maine they have a good crop of apples. Can it be that some good St. Patrick has driven the venomous insect from that State? I trow not, for I do not believe that the down-easters are good Catholics enough for that. Nor will I believe that it is a paradise as yet uninhabited by this marauding Turk, for he follows civilization, and is about as universal as the original sin of the catechism—

"In Adam's fall
We sinned all."

Then again, the apples have a deformed, starved look—stunted in their growth, like the inhabitants of the polar regions, where the sun is so miserly of his heat and light. When the young fruit was growing it lacked light and heat, and like every thing thus deprived of these essentials, it made but an abnormal growth. There is a great flutter among the housekeepers for the lack of materials for pies and preserves. As to the latter article, we would not advise very deep mourning for their loss; we shall be as strong in body and mind without them—and those who consider them a *sine qua non* can, if they will take plenty of refined sugar and lemons, make as handsome preserves out of water mellow rinds and pumpkins as one would wish to see. And if they only *look nice*, Mr. Editor, on the table, why they will do to place beside the rich loaf-cake, and you and I will compliment these ladies on the prettiness of their table, and come home to satisfy the appetite with some of that aforesaid bread and butter.

Speaking of sugar reminds me of some experiments we have made here in raising the Chinese sugar cane. We had a small quantity in our garden that grew well—and here last Monday my husband had an original idea occur to him. Now I do wish men wouldn't have original ideas on Monday, or want to make experiments just as we are taking the clothes from the boiler. But then we were told that this experiment might be for the good of the country, and as it was on the eve of Pennsylvania election, when a great effort was to be made for free labor there, we consented that our experiment should be cotemporary with that; or rather, *entre nous*, if we indulge a husband in some of his notions, we may reasonably hope for more indulgence in our own. So amid the "noise and confusion" of washing-day the cane was cut and pounded in a most primitive manner in the wooden tray, and boiled and strained till a thick, rich

syrup was actually produced; and if the sugar planters of Louisiana had heard our remarks and prophecies over that bowl of syrup, they would have *"hook in their shoes."*

It makes a rich syrup, but has an acid like the cane and beet, which must be neutralized to make good sugar. One gentleman here has succeeded in ripening the seed by sowing in a hot bed. If we can cultivate this cane in New England, I see no obstacles to our making our own sugar at a cheap rate.

We have raised a few peaches here, by protecting the trees during the winter. We find by training the trees low, and bending the branches in the fall, we can have quite a sure crop, and we think it pays the way, as the fruit can only be had in perfection directly from the tree.

Those who have grape vines here, have been very successful this year in ripening the Isabella and Sweet Water, rather difficult in common seasons.

We find that the pears which do best in this climate are the *Paradise d'Automne*, *Flemish Beauty* and *Winter Nelis*. The *Napoleon* and some others do not prove good, and the *Bartlett* does not thrive as with you.

I must not forget to tell you that we had on our table for tea last week a dish of raspberries, the second crop of the season, the result of our beautiful fall. Beautiful I must indeed call it, for having no frosts, the leaves of our forest trees have ripened slowly, and the change in the cellular tissue has been so gradual that our woods have had time to array themselves in the most gorgeous robes I ever saw them wear. The deep blue of our October skies, and the gold and crimson drapery of the forest, have been such a feast to the eye, that the tongue cannot help exclaiming, hourly, how beautiful! It surpasses the richest display that can be made on Washington Street.

But, Mr. Editor, you know I make it a rule never to write for the *Farmer* "unless I have something to say, and then stop when I am done."

Yours truly,

A. E. P.

Springfield, Vt., Oct. 18, 1856.

Our thanks are due to the lady who sends us the above, and whose favors are always welcome. We hope yet to be able to test that "bread and butter," the thought of which makes our mouth water. One who can discourse so pleasantly and intelligently of all the affairs of the farm, must surely be a pattern house-wife, and capable of manufacturing bread and butter "fit for the gods."

GRAPES.—At the late pomological meeting at Concord, this was said of the Concord:—

Concord. C. Downing had fruited it and found it about ten days earlier than the Isabella—Col.

Frost, of Schuyler county, about six days before Isabella—W. Reid, of New Jersey, had found it a week earlier, and had formed a more favorable opinion of it than seeing it at Boston. H. E. Hooker, of Rochester, said that on his grounds it was not so early as Diana, but ripened about the same time as Isabella.

A fact was stated by — Hanford, of Indiana, showing the importance of a dry bottom for grapes. On a porous soil, vines had withstood thirty-one degrees below zero, but on impervious subsoil they were killed.

EXTRACTS AND REPLIES.

CHINESE SUGAR CANE.

J. A. FRENCH, North Clarendon, Vt.—The Chinese sugar cane seed is for sale by Messrs. Nourse & Co., 13 Commercial Street, Boston, at fifty cents a pound. We have no doubt it will grow well on Otter Creek, under the same cultivation that you give Indian corn. You may plant in hills or drills. We have a bottle of molasses made from this cane in Georgia, at the rate of 400 gallons an acre. It is very clear, and of fine flavor.

WATER TO HOUSE AND BARN.

Will you inform me what is the best method to convey water to the house for family use, and barn for stock? Is lead pipe considered healthy, and is gutta-percha pipe good for such purposes, and if so, what is the cost and durability of it, and where may it be found? J. S. SOMERS.

Barnet, Vt., Oct. 8, 1856.

REMARKS.—We cannot recommend the use of lead pipe for carrying water for family purposes; we should prefer wood, stone or gutta percha for conveying it to the barn, unless the water were pure spring water. Good chestnut logs, with a two or three inch bore well laid, would last many years. Pipe is made of stone, also of iron and glazed, but are at present too expensive. Cement pipes are also made, and Mr. A. Butterfield, of Colosse, N.Y., states, that he can construct pipe for 37½ cts. a rod, and found, and that it will be as lasting as time. MR. CHARLES STODDER, 75 Kilby Street, Boston, will tell you all about gutta percha pipe.

CARROTS FOR HORSES.

Please inform me the proper quantity of carrots for the daily allowance for a horse. A person pretending to know, tells me all over four quarts per day are worse than wasted. If this be true, surely your numerous subscribers ought to know it.

Hanover, Mass., 1856.

S. T.

REMARKS.—In addition to four quarts of cob-meal with cut hay, we give our work horses *four quarts* of carrots, at noon, and no other feed. This keeps them in good flesh and spirits. If their labor is constant, they would require as much again meal. If a hard working horse could have *eight*, instead of four quarts of carrots, he would be benefited by them, if he had only four quarts of meal.

TO PREVENT ANTS, COCKROACHES AND OTHER VERMIN.

MR. EDITOR:—Noticing in your paper for August a writer who mentions having much trouble with red ants, I send you the following method of getting rid of them, as well as cockroaches and all creeping insects that infest our dwellings.

Take one ounce of corrosive sublimate, (common bed-bug poison) mix it in one pint of New England rum, and let it dissolve. After cleaning the closet or other place thoroughly, take a pencil brush or feather, wet it well with the solution, and draw it along every crack and crevice, and across the threshold of the door, (if a closet,) and across the sills of the windows. Do this once in three weeks, in warm weather, and it will be found a perfect preventive. I have used this for a number of years, and have never found a creeping insect willing to cross any crack thus treated. I use it also upon my piazza floor where spiders are apt to be troublesome.

Respectfully, C. C. A.

Newtonville, Oct. 5, 1856.

QUERIES ABOUT CRANBERRIES.

I am just beginning farming on my own account, and find a great deal of useful information in the *Farmer*, but I want a little on a particular point. I wish to set out a patch with cranberries. I have an excellent run, or meadow, which I think is well adapted to such a purpose. I find sand at the bottom of the mud. There is a natural bed of them upon it already; will those plants do to take up and set out? How far apart the hills or rows, when the best time to set them out, and how prepare the land, &c. &c. A few words of advice will be gladly received by

A SUBSCRIBER.

Derry, N. H., Oct. 6, 1856.

TO KILL TICKS.

NORTH CLARENDON, Vt.—MR. J. A. FRENCH, of this place, states that flax seed fed to sheep, about a table spoonful each day to an animal, will destroy the ticks, and promote the health of the animal. He mixes it with cut feed.

A THRIFTY "SCION."

I have an apple tree scion which I set last May, the entire growth of which measures twenty-six feet five and one-half inches. Perhaps this may not seem to you, or your numerous correspondents, anything extraordinary, but it seems to me to be an uncommon growth, and is at least deserving of being called a little fast.

P. B. HOOD.

Milford, N. H., 1856.

A RARE CHANCE.—Upon application to us personally or by letter, we will inform the person wishing to purchase, where he can obtain thirty to fifty acres of excellent land, at a moderate price. It is a deep, black, sandy loam, without stones, and situated within five minutes' drive of one of the pleasantest villages in Middlesex county. There are some apple trees now on it—no buildings, but a fine, high location for building, bounded by the highway.

For the New England Farmer.

PATENT OFFICE REPORTS.

MR. EDITOR:—Having often seen in different papers the reports of the Patent Office spoken of as though the statements therein contained were not just the thing, or were, many of them, exaggerations, I have been led to examine the subject, and have come to the conclusion that, as a general thing, they are correct. And now for the reason of this. A farmer, or any one else, shall receive a package of seeds from the Patent Office, with directions it may be as to planting, &c. Now in the natural course of human events, the crops expected from these particular seeds will receive very particular attention. Probably they will occupy the best land on the farm. Taking these things into consideration, is it to be wondered at, that the crop is a large one, and the "statement," or report, rather a "tall affair?" Most assuredly not; for cause and effect have not ceased to follow each other as yet in this go-ahead day of progress. These reports only illustrate what ought to be a general thing with every crop cultivated on the farm.

When farmers have learned to carry all their operations to the highest state of perfection instead of attempting so much, and half doing the whole, they will have made a rapid stride in the right direction, and they may lawfully be classed among the "progressionists" of the day. The more I reflect upon the subject, the more I am convinced that too much land is the curse of modern farming. In the "good times coming," this great lesson is yet to be learned. Many have already got it by heart, and they are the men who find farming a delight, and a paying business. This class of farmers, believe in blood stock, in the use of mowing machines, horse rakes and steam plows. They "keep their eyes open," and if you wish to get ahead of them, you must rise early, and be in no hurry to go to bed.

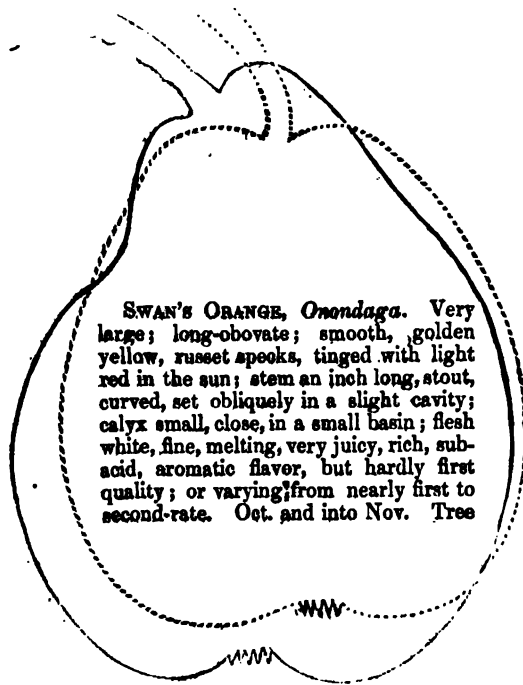
But the great million have not yet learned this lesson. With them, the Patent Office Report is a humbug, book farming a bore, blood stock, mowing machines, &c. &c., a nuisance. Their eyes need to be opened. Notwithstanding, Mr. Editor, this great stumbling block, the world will continue to progress, and the science of agriculture with it. There is a heaven at work among the farming interest which is destined to affect the whole mass. For one, I rejoice for what the Government at Washington is now doing for the benefit of the farmers of the United States. It is a move in the right direction, and a vast amount of good must be the result. Let every tiller of the soil speed on the good work. In its distribution of seeds, we have only a prelude, I humbly trust, of what is yet to follow. No better man can be at the head of this department than the present incumbent, D. J. Brown, Esq. I only regret that our government is not liberal enough to supply every legitimate farmer in the country with the Agricultural Report of the Patent Office.

October, 1856.

NORFOLK.

The weather-wise are predicting a mild autumn and an open winter. They say that when the sun passed the equinox on the 20th of September the wind set the whole day from the southeast, giving us a warm storm, and that during several days the wind stood in the same quarter. This prognosticates a continuance of the same character of weather during the next six months.

SWAN'S ORANGE AND WHITE DOYENNE.



SWAN'S ORANGE, *Onondaga*. Very large; long-ovate; smooth, golden yellow, russet specks, tinged with light red in the sun; stem an inch long, stout, curved, set obliquely in a slight cavity; calyx small, close, in a small basin; flesh white, fine, melting, very juicy, rich, sub-acid, aromatic flavor, but hardly first quality; or varying from nearly first to second-rate. Oct. and into Nov. Tree

hardy, vigorous, and a great bearer. As it combines many excellences, it is regarded as one of the best. Origin, farm of Mr. Curtis, Farmington, Ct., whence a graft was carried to Onondaga, N. Y.; there propagated, and lately disseminated.

WHITE DOYENNE, *Virgoulouse*, St. Michael, of New England, *Virgalien*, of New York, *Butter Pear*, of Pennsylvania. (Dotted Outline.) Rather large; obovate; clear pale yellow, with small dots; a red cheek, full in the sun; stalk an inch long, stout, in a small cavity; calyx small, in a shallow, finely plaited basin; flesh white, fine texture, melting, very buttery, of a rich, high, delicious flavor. Oct. and into Nov. Many regard this pear as a standard of excellence; many others prefer the Seckel. It is perfectly hardy in tree and fruit, and first-rate in quality, in the Middle and Western States, in western N. Y., and in the region of Baltimore; but it generally blasts and cracks in New England, on the sea-coast, yet it still flourishes in the interior. Where uncertain, it does better on the quince.

For the New England Farmer.

THE FARMER'S HOLIDAY.

It is a fine autumnal morning toward the latter part of September; summer's verdancy is just giving place to the first hues of decay, and soon that canopy of varied coloring will have passed through the vicissitudes of its life, and sought a superficial earthy bed, to be interred by the drapery of winter. Sad thoughts might arise at these tokens of decay, but to-day's scenes are of a character to cheer us in the midst of these marks of approaching gloom; for it is the farmer's holiday, and his wife, sons and daughters are permitted to participate in its pleas-

ures. Since I have been privileged to witness these entertainments, my views of the matter of agricultural fairs have essentially changed. The sentiment, once entertained, that it was unladylike and improper for our sex to attend them, or, at least, to take an interest in the fine specimens of the brute creation usually to be seen on such occasions, I now regard as a weakness approaching to imbecility.

That the conduct of some individuals, (as on all public occasions,) is quite exceptionable, on these I do not deny; although of this I would not speak, but would look at brighter things.

The "Ladies' Collection," and the "Collection of Ladies," are things self-evident, as we say in mathematics, and need not be commented upon here. Neither the specimens of an abundant harvest, of the produce of the maple and the apiary, which remind the farmer how rich his board will be all through the long cold winter; nor the cheval kind, which cannot fail to attract the attention of all who admire the majestic and beautiful in the animal creation, nor the patient ox, and motherly cow, in which we farmers' daughters are proud to say we take an interested pleasure; all which, seen at our recent fair, are worthy each of a chapter; and I pass these, to speak more definitely of an object which must have riveted the attention of every beholder.—

It was not, as might be imagined, a splendid horse, or a mammoth ox, but a *Sheep*, both mammoth and splendid, owned by Mr. Lawrence Smith, of Middlefield, Mass. He boasts of transatlantic origin, having been brought from Oxfordshire, England, a few years since. One might very easily imagine him the noblest of some kingly line, and would treat him with a different courtesy, demanded by a truly noble descendant of our mother country; at least, all ordinary sheepdom must bow to him, and acknowledge his sovereignty.

If the seeing of this noble animal had power to draw tears from the eye of an English lady, who witnessed it at the World's Fair in New York, it can but draw a beam of pleasure from that of a true American lady, who appreciates the beautiful in all the productions of nature. His symmetrical figure defies the embellishment of art, and the hue of his even coat equals in whiteness that lady's hose, which possibly might originally have formed a part of his wardrobe, a second-hand garment truly! A view of this specimen of nature's perfection would well reward one for the trouble of a considerable journey; especially at this season, it might be truly refreshing, from its association with the idea of warm yarn mittens, hose, mufflers, etc.; for he might at any time spare enough from his load of wool, to form a universal covering for his owner, even though his dimensions were some feet above mediocrity. Nor is this the only rare specimen of the agriculturist's possessions to be seen on the premises of Mr. Smith, but to him especially would I pay my respects, with a wish that by the public he may be more particularly noticed as he deserves.

Worthington, Oct., 1866.

KEEP MORE STOCK.—Stock growing is fast becoming popular among our most astute farmers.

They begin to find, or rather to realize "in the light," as the Quakers say, the truth of the Scotch maxim, "No cattle no manure, no manure no corn." So long as our generous alluvial soils gave crops without stint, the farmer only set down the cost of feeding a pair of three year olds against the small sum for which he sold them; counting as nothing the manure they made, which alone prevented the deterioration of his soil. But all this is changed now: three year olds are sold at this time at more than \$50 a head, and such is their scarcity on the farm, that the soil is fast deteriorating, except among those thinking farmers who have bought as many lean kine, as they have sold fat ones. These men have grown large crops of corn, and fed it all to their animals, thus realizing stall-fed prices in their sales, over and above the gain in that extra nitrogenous manure made from corn fed-cattle.—*Rural American.*

For the New England Farmer.

INCIDENTS OF TRAVEL.

So much accustomed have we all become to being whiked over hills and through valleys, boxed up in railroad cars, with our eyes closed to keep out cinders, and gasping for breath, amid smoke and dust, that we are in danger of losing all idea of the beauties of natural scenery—at least, of the pleasures of travelling in the country. Railroad travelling is tolerable for business excursions, and whenever dispatch is paramount to all other considerations. But to take the cars, thinking to see and enjoy the beauties of the landscape, borders upon absurdity. I should as soon think of a pleasure trip over the sands of the Great Desert, packed on the apex of a camel's back, or of being sent or drawn, *nolens volens*, through the underground letter-box of the new telegraphic fixture.

Give me the old mode of travelling yet; a good horse, a comfortable vehicle, and agreeable companions, a smooth road, and pleasant weather; with such an outfit—the time, September—a man must be blind, or a dunce, who would not meet with a profusion of objects and incidents worth recording. Having recently taken such a trip through a portion of the Connecticut valley, from Amherst, Mass., to Hanover, N. H., I forward you, Mr. Editor, some of my "pencilings by the way."

Sunderland.—This little town is worthy of special mention. It embraces less than six square miles, about one-half of which is occupied by Mt. Toby. The residue, naturally light land, is made highly productive, and sustains a population of 900 inhabitants. There are not many towns in the commonwealth, in which the agricultural reformation has taken stronger hold than here. A Farmers' Club is in full tide of successful experiment, and its good effects are visible in every part of the town. During the winter, semi-monthly meetings are held, when the old and the young meet and compare notes, and discuss topics connected with their vocations. In the spring, the whole field, embracing agriculture and horticulture, is divided into convenient sections, and committees are appointed to make observations and experiments in each, and report to the club in autumn. This plan proves eminently successful, and it would be well were this example generally imitated.

South Deerfield is a place of interest, connected

with the early history of this valley. A granite monument commemorates the fall of Lathrop, and most of his eighty followers,—the "flower of old Essex." A marble slab lying upon the ground, designates the spot where the bones of most of the slain were buried. At the laying of the corner-stone of said monument, nearly a quarter of a century ago, there was a great gathering of the free-men of this portion of the valley, and Edward Everett delivered an oration worthy of the occasion—worthy of the Massachusetts colony. As if conscious that he stood upon soil consecrated to freedom, that he was surrounded by a free people, he gave utterance to words that breathe, and thoughts that burn, touching the wrongs of the red men, and the natural, inalienable rights of all to "life, liberty, and the pursuit of happiness." With eloquence seldom equalled, he extolled the wisdom of our ancestors in planting, watering and defending the tree of liberty, while, with withering rebuke, he depicted the blackness of tyranny.

Old Deerfield is the garden of New England.—Comparisons may be invidious; but I have not seen the town in New England, which, in fertility of soil, beauty of scenery, and natural advantages, surpasses this. Both the Connecticut and the Deerfield rivers contribute to its productiveness and its beauty. The banks of the Nile have acquired a world-wide fame for fertility. But without the ponderous and expensive machinery for irrigation, they never could have equalled in productiveness the "meadows" in Deerfield. The village is charmingly beautiful. Nestling coisly at the foot of Deerfield Mountain, on the east, with broad fields of the most fertile alluvium, diversified with the various crops of the climate, stretching far to the south, the west, and the north,—with its long avenue of majestic elms, which "have come down to us from a former generation,"—with its substantial and commodious farm-houses, built more for use than ornament, but combining both in a degree,—with its neat white cottages interspersed, which speak of modern times,—with its grove-encircled academy, and neat church spires, towering above the elms, it constitutes an object which every traveller of correct taste must contemplate with feelings of delight. No wonder the Indian was loth to leave this spot. The mass meeting of 8000 persons, recently assembled here to sympathize with the friends of the murdered Hoyt, shows that the hearts of this people, as well as their village, are in the right place.

Greenfield is a city set upon a hill; a thriving town, which owes its prosperity to several causes, such as its fertile meadows, its manufactures of cotton fabrics, joiner's tools, cutlery, and infantry carriages, baby-wagons, the enterprise of its citizens, and the fact of its being the shire of the county. Should the Hoosac ever be tunneled, Greenfield will become far more consequential.

Seven miles north is *Bernardston*, a fine old town, with whose prosperity the name of Henry W. Cushman is closely identified. From the number of its churches, a stranger might infer that the state of morals is bad, seeing it requires the labor of so many clergymen to keep the people in order.

In *Guildford*, the second town in Vermont, are extensive quarries of slate. Since the opening of the C. R. Railway, these quarries have been in active operation. The price of slate, at the depot, varies from three to six dollars per square, or one hundred feet, which is about the cost of shingles.

I wonder that slate is not more used. A roof thus covered, is fixed for time. The inquiry is often made, if chestnut shingles are worth laying? I saw chestnut shingles taken from a roof in Brattleboro', which, I was told by the owner, had been laid 24 years.

Brattleboro' has become a place of much resort during the summer season. The Hydropathic establishments here call together multitudes from all quarters, and make this little village as busy as a bee-hive, and as gay as a butterfly. Such success has attended the two now in existence, that a third is to be opened before the next watering season.

H.

For the New England Farmer.

"NOTHING LIKE THE FARM."

It would be interesting, Mr. N., to know how you came by that idea. You must be easily situated as regards this world's goods, or have such an education that you can sympathize with the misery of farming; always looking on the bright side, letting the darker one take care of itself. I would like to have you down here, and have to farm it as I do; you would say, not anything like a farm, I reckon! Think of thirty-five acres of land all worn out, fairly skimmed of all its resources, covered with rocks, grown over to bushes, not a chance to feed more than one cow and an old horse, who if he had to get his living on the place, would look as some farmer's horses do when they dine on barrel staves. When I get my hay, I have to go over nearly ten acres to cut a ton of good English.

You tell us about good old Job; I should like you to tell me whether he had a good farm, or a poor one? if he had to do all his work himself or not? Perhaps these researches might be interesting to the farmer, if you would take time to investigate them, and bring the results before the public. In my copy of the Sacred Word, I find him in possession of every thing needful for the purpose of pursuing his business, and I believe it is recorded in the same book, that when affliction came upon him, he did bemoan himself that God had chosen to take away his former greatness. And is it strange that we poor farmers complain of our lot?

Farming is calculated to expand the mind, you think? (according to Dr. Johnson, that means enlarging the mind.) Why sir, I don't know one-half as much as I did when I first went to farming. When I commenced this vocation, I knew more about it than any old farmer who had been in the business for a lifetime. I could tell him how to pursue his occupation, and amass an independent fortune in a few years, as well as to have his farm the object of admiration and envy to the whole neighborhood around him.

You say it softens and humanizes the feelings. Would it soften your feelings to have a neighbor who will not put up his part of the fence between you and him? who insists he has a right to feed your land, when his cattle get over the wall, and puts his old cow where she will be sure to get her fodder on another's land? who thinks you insult him every time you speak about having the lines run, in order to know whether your land is out door or not? It has a different effect on me; it rather hardens my feelings towards mankind, but perhaps I am not blessed with that forget and forgive spirit which some other men have.

I should like to know if merchant's sons are contented? if they are not as restless as farmer's sons? Don't they like to go down to Newport, or Nahant, to see the belles? Why should not farmer's sons be very anxious to roam around, and see the fashions of this little world? Is it anything very strange, that they should be looking after some smiling face just in hoops, and are therefore discontented?

You have shown us the effects of good farming, and I for one should be pleased to hear by what causes you have arrived at that position in life which you seem to have attained. I should like to know what a farmer can do on a rainy day like this, when we have had a gentle shower of only thirty-six hours, and bids fair to continue thirty-six more? What sort of feelings you would have in regard to farming, if you had to pay six dollars and a half for ploughing an acre of land, and then have to beg almost to get it done? Would it enlarge your mind any to read of the valuable effects of guano, think you would try it, and put on a plenty, so as to get the greatest amount of good from the land you could, and find after you had planted it, you had killed the seed by your too lavish expenditure of fertilizing materials? POOR FARMER.

North Bridgewater, 1856.

REMARKS.—"A Poor Farmer" suggests many interesting topics in a negative form. It seems to us that where it costs \$6.50 to plow an ordinary acre of land, the services of the farmer, and his team, are in demand; and how that fact squares with cutting over ten acres for a ton of English hay, we cannot imagine. "A Poor Farmer" is fairly entitled to an answer to the question, "By what causes have you arrived at that position in life which you seem to have attained?"

FRUIT GROWING.

At a late meeting of the "Fruit Growers' Society," of the western section of the State of New York, statements were made by several of the members, going to show that fruit growing was the most remunerative of the farmer's labor. Dr. Sylvester, of Lyons, showed a clear profit of \$175 per acre, and alluded to a neighbor's orchard which averaged \$100 per acre. A. Loomis, of Byron, Genesee county, calculates from some Baldwin apples grown by his brother, that a profit of over \$500 per acre has been made per annum, after making allowances for the failure of the fruit every other year. It is known that Mr. Pell, near New York, has made very large profits by shipping Newtown Pippins to England, and he has devised methods which secure him fruit every year, using lime and careful pruning. Dr. Underhill states that quinces, grown for the New York market, produced him a profit of \$1,200 per acre. He is on the Hudson, at Croton Point, and has made a fortune at the fruit business.

The main thing needed by the farmers, in this section, to the profitable raising of fruit, is some plan whereby they can secure a full crop every year, instead of (as now) every other year. We know of one apple orchard, of about 500 trees in this county, which, last year, producing 2,500 bushels of apples, will not yield five bushels this fall. The product of four trees on that orchard, last year

brought \$80; this year the four have not produced fifty cents worth of fruit. Some method whereby this biennial barrenness may be overcome, is all that is needed by our farmers, especially those owning small farms, to make the fruit raising business profitable to them, beyond that of any other crop.—*Albany Argus.*

BLESSED MEMORIES.

We hunted berries by a babbling brook,
And odorous flowers from every sunny nook;
And stopped to laugh and hear the echo's mock
Ring from old woods and gloomy rifts of rock.

We walked at noonday in a sheltered glade,
Where sun nor starlight ever broke the shade;
Within the damp and gloom a bird-song gushed,
A streamlet through a rocky crevice rushed.

A moaning murmur through the pine trees swept,
Within the caves the owl in safety slept;
The laurel's snowy pillars opened there.
And poured their poisons on the sunless air.

We paused to rest beneath a trailing vine
That clambered darkly o'er a blasted pine;
Above the rocks its sweeping curtains hung,
And o'er the stream in tangled masses swung.

She had a great proud wealth of golden hair,
That shone like moonlight in that shadowed air;
A large blue eye that made me think of heaven,
When not a cloud across its deep is driven.

She sang: not as they sing with heedless lips,
When keys are sprung by rosy finger-tips,
But that strange strain we only hear in dreams
From voices tuned to more than mortal themes.

She walks no more that narrow unsummed glade,
Long, long ago she passed a denser shade;
And when the darkness fled and morning broke,
She slept in death, and with the angels woke. *Tribune.*

For the New England Farmer.

A CATTLE SHOW IN GRIGGSVILLE, ILL.

MR. EDITOR:—I propose to give you a brief sketch of a county Ag. Exhibition, which I attended at Griggsville, Ill., on the 8th and 9th of Oct. It was for the county of Pike, on the western border of the State. The exhibition was very much on the plan of our New England exhibitions, but the arrangements were not so complete as with us. On one side of the open space where the fair was held, a roof was erected under which the fruit and vegetables and the handiwork of the ladies were placed. The rest of the space was roped in, and into this enclosure, the horses and cattle were driven, to be inspected by the various committees, and then withdrawn. The horses were tied to trees or held by boys; the cattle, some were served in the same way as the horses, others were shut up in pens, formed by piling oak rails one upon another, after the fashion of Virginia fences. The number of cows and heifers was not large. The animals themselves were of good size, and generally of good shape, but evidently not calculated for dairy stock. The great object here, is not milk, nor butter, nor cheese, but beef for the market. The largest and finest bulls I have ever seen, and in the greatest numbers, I think, I saw here. The weight of the largest one was 2150 lbs. The prevailing breed, here, is the Durham. Cattle are not so much used in teams, as horses and mules. Of these last, I

saw some very fine specimens. There were a few sheep, but they were rather inferior looking. The hogs were few, considering that this is a hog-raising country. I saw some quite large ones, but they were coarser made and much less handsome animals than we are wont to see at our New England fairs. The hogs here, as you know, run at large in the streets and in the woods, and pick up their food wherever they can. There were some noble looking draught horses on exhibition, some of the finest I remember to have seen. The carriage horses, as a general thing, are better looking than ours, but I think I could select single specimens from among ours altogether superior to any I have yet seen here.

And now a word about the products of the soil, and the specimens of handiwork, and I have done. In the potato line; there were some fine Chenangoes, Pink-eyes and Baltimore Blues. The potatoes here are not affected by the rot. There was a single basket of beautiful looking turnips. Squashes and beets were scarce. I saw no pears, nor peaches, and but few apples, (although apples, this way, are plenty and good) but these few were very fine. I measured one and found it 18½ inches in circumference, it weighed 15 ozs., another measured 16 inches in circumference. There were some large ears of corn, and some specimens of wheat. I saw to-day, though not in connection with the Fair, a corn-stalk, that by actual measurement, was 16 ft. long. About half past three, the company was invited to listen to an address from Prof. TURNER, of Jacksonville. He spoke only half an hour, but his address deserves to be printed, and circulated far and wide. The following is a bare outline of it. He said: "Gentlemen and fellow-citizens of Pike County, I hail the happy auspices which have hitherto attended our exhibitions, and which to-day attend us, as omens of good, for the future prosperity of this society, of the agricultural interests of this county, and of our rising and beloved State." He then considered at length, some of the causes, that have hitherto checked progress, in this important source of national wealth, and some of the means to be used in promoting its greater advancement. 1st, Associations like this are of invaluable importance. They awaken interest in the subject. They set men to thinking; they lead to an interchange of thought, to a renunciation of old, and used up theories and practices, and an adoption of new ones, better suited to the condition and wants of the age. This cause needs the assistance of judicious legislation. While commerce and manufactures are yearly receiving aid from Congress, by appropriations and favorable enactments, this great interest, which engages, at the present time, four-fifths of the capital of the nation, is ruthlessly neglected. Ought this to be? Commercial and manufacturing capitalists spend thousands upon lobby members, in Congress, who do nothing but agitate their interests. We have nothing of the kind. Candidates for office, on the stump, never fail to declaim loudly upon the importance of the subject of agriculture, and upon what they desire to see done for it, by Congress, and what they intend to do for it themselves, if they only get there.—But alas! Congress assembles and adjourns, year after year, and nothing is done, and when you ask the men whom you have sent there, what was done with the agricultural bill? 'O, it was left among the unfinished business.' Gentlemen, my advice is,

that you leave these men among the unfinished Representatives. You must vote for men who will attend to your interests. For half a century, we have sought to have our agricultural Bureau established, but for half a century, we have failed. With you, and the farmers of our country everywhere, the ultimate success or failure of this project rests, and the careful instruction of the young, in matters pertaining to agriculture, is a means to be used in promoting the prosperity of this cause. Instruction in our schools should be of a more practical character. God and nature never intended that Latin and Greek, and the higher mathematics, should be taught to children, who are to become farmers. Subjects should be brought before them, a knowledge of which will be of practical advantage to them in after life. This is but a meagre sketch of Prof. T.'s remarks. On Thursday there was a plowing match in the forenoon, and in the afternoon, a trial of skill in horsemanship by the ladies. Thus ended the first exhibition of the kind ever held in this town, and the fourth ever held in the county. It is proposed to make Pittsfield, the county seat, the permanent locality for these fairs.

J. B. R.

Oct. 10, 1856.

A JAPANESE FEAST.

It is possible that intercourse with this exclusive nation may add some new dishes to the American cuisine, but Commodore Perry's experience of their hospitality was not very tempting to an epicure, as one would infer from his account of the entertainment:

"Immediately on entering, the guests were desired to seat themselves, the Commodore, with Captains Buchanan and Adams, occupying the highest tables on the right hand, and the regent and his associates the one opposite the left. A pair of chop-sticks was placed at each corner of every table; in the centre was an earthen pot filled with *saki*—the intoxicating drink made by the Lew-Chewans—surrounded with four acorn cups, four large, coarse China cups, with clumsy spoons of the same material, and four tea-cups. On each table were dishes to the number of some twenty, of various sizes and shapes, and the exact basis of some of which no American knoweth to this day; possibly it was pig. Of the dishes, however, which were familiar to western apprehension, there were sliced boiled eggs, which had been dyed crimson, fish made into rolls and boiled in fat, pieces of cold baked fish, slices of hog's liver, sugar candy, cucumbers, mustard, salted radish tops, and fragments of lean pork, fried. Cups of tea were first handed round; these were followed by very small cups of *saki*, which had the taste of French *liqueur*. Small sticks, boobam sharpened at one end, and which some of the guests mistook for tooth-picks, were furnished, to be used as forks, in taking balls of meat and dough from the soup, which made the first course. Soup constituted also the next seven courses of the twelve, where of the repast consisted. The other four were gingerbread, salad made of bean sprouts and young onion tops, a basket of what appeared to be some dark red fruit, but proved to be balls composed of a thin dough rind covering a sugar pulp, and a delicious mixture compounded of beaten eggs and a slender white root with an aromatic taste. Novel as was this bill of fare, the

gentlemen of the expedition endeavored, with true courtesy, to do honor to the repast, and at the end of the twelfth course respectfully took leave, though they were assured there were twelve more to come. The number of the courses indicated a desire to do our countrymen a double share of honor, inasmuch as twelve is the prescribed number for a royal entertainment."

CATTLE SHOW AT AMHERST.

The *Express* gives a glowing account of the exercises at the dinner table on the day of the recent annual Show at Amherst, and quotes portions of the speeches made. It must have been a brilliant affair, while it was wholly appropriate to the occasion, instructive as well as brilliant. The speakers were, Mr. DICKINSON, the President of the Society, Dr. HITCHCOCK, the orator, J. H. W. PAGE, Delegate from State Board of Agriculture, A. H. BULLOCK, of Worcester, one of the Trustees, of Amherst College, FRANCIS DE WITT, of Ware, the present Secretary of State, C. C. CHAFFEE, M. C., of Springfield, and Professor HAVEN, of Amherst. We have not found such eloquence and enthusiasm in any other similar gathering this autumn.—As one of our good old fathers said at Lexington, "why, they are firing bullets,"—so, at this festival, they so far departed from the usual custom as to talk about agriculture! The Union was saved but once, and that in the briefest possible manner.

But why will not the farmers themselves sometimes talk at these gatherings? They have the facts, and with occasional efforts, and such excellent examples as were afforded them on the occasion of which we have just been speaking, they could not fail to instruct others, and would increase their own interest in the subject. Try it, brethren, and take a full share in all the departments of our instructive and useful festivals.

We regret that we could not be at Amherst, and reap a portion of that ample harvest for ourselves. But we shall gather up the rich sheaves that have come to our hands, and ponder them well.

For the New England Farmer.

FAIR AT NORTHAMPTON.

The Annual Fair of the Old Hampshire Society was holden at Northampton, on the 7th and 8th inst. The exhibition compared favorably with those of former years. The society has purchased and enclosed a plot of ground with a high fence, including a trotting course. The exhibition of horses was unusually good, and the show of speed was among the greatest attractions of the occasion.

The orator was *non inventus est*. These frequent failures are extremely annoying, and call for reform.

It may well be questioned whether this new feature in our agricultural shows—trotting-matches—will work more good than evil. Please let us have your opinion, Mr. Editor.

H.

For the New England Farmer.

THE MORRILL HORSE.

MR. EDITOR:—I noticed in the *N. E. Farmer* last August, the following inquiry: "Is there a horse known as the Morrill horse? If so, where is he, and what is his pedigree?"

In reply I will say that the "Morrill horse" was raised by French Morrill, of Danville, Vt., and kept there till sometime last month, when Mr. Morrill started for Illinois with the horse and four of his colts. This horse is thirteen years old last spring, of a very dark, rich brown color, fine proportions, and weighs about 1200 pounds. His pedigree, so far as known, is as follows: Sired by Jennison horse. Jennison horse sired by young Morgan Bulrush. Young Morgan Bulrush, by old Morgan Bulrush. Old Morgan Bulrush, by original Justin Morgan. Dam of Morrill horse, part Messenger, but true pedigree not known. Dam of Jennison horse, English. Dam of young Morgan Bulrush, pedigree not definitely known, but supposed to be Morgan.

In consequence of a wrong impression upon the minds of some horse-men in relation to the size of the Morrill, I will mention that Mr. Abijah Jennison, of Walden, Vt., writes me as follows:—"I raised the horse known as the Jennison horse. He took the name from me. He was a horse of great power and docility. His color was a bright bay, with black mane and tail, not a white hair on him. He weighed, I should think, when I sold him, some over 1200 lbs. He sired the Morrill horse, when only two years old, and, consequently, if living, is 16 years old last spring. I sold him in Franklin, N. H., to a man by the name of Heath. His given name I did not learn."

I will here state that this Jennison horse is reported to have been taken to Mass., and gelded. The Morrill horse took the second premium at the National Horse Show at Springfield, Mass., three years ago this fall. He is, I think, with the exception of one of his colts, the most powerful horse that we have any account of in America. He can take a wagon of common size, with two, and even three men in it, and trot his mile in two minutes and fifty seconds, with comparative ease, and in the highest style. He is very kind and docile, being frequently driven by Mrs. M. To have him go West is a great loss to New England breeders; but he will doubtless be heard from there. There are several of his colts in northern Vermont. One in Barre, known as the young Morrill, owned by Silas Town and Luke Trow, of which I may speak hereafter. Yours truly, LEONARD F. TUCKER.

Meredith Bridge, N. H., Oct. 13, 1856.

PROPER UNDER-CLOTHING FOR WINTER WEATHER.—Welsh flannel or merino (all wool) shirts, with drawers of the same material. Knitted worsted stockings, with a chamois leather jerkin or waistcoat with sleeves, to be worn over the flannel in the coldest weather, or in bleak windy days.

FOR THE LADIES.—The same garments of the same materials, except that in the article of drawers they may preferentially use linsey-woolsey, or Canton flannel, and these should be made tight at the ankles. No HOOPS! no funnel sleeves for the cold air to rush up to the arm-pits, and chill the chest. The shirt, and other under-clothes, as well as the

dress, should be made to cover the shoulders and collar-bones, close around the throat. By this means you will be prevented from throwing additional weight upon the shoulders, in the shape of extra shawls and cloaks, and thus diminish the labor of breathing. Also cover the top of the head. Beware of catarrh and neuralgia!—*Medical Specialist.*

EXTRACTS AND REPLIES.

A NEW FERTILIZER.

MR. BROWN:—I take the liberty of forwarding you a sample of potatoes by Harding's express. The result of my experiment this year is so astonishing, having produced from a piece of land 33 by 28 feet, ten bushels, of which the sample I send you is fair a average, I consider it my duty that this should be made known to you, and also to the public, through the medium of your inestimable paper; this year's produce confirming the last ones experience. These potatoes have been produced with no other manure than Lloyd's superphosphate of lime; it surpasses all I have ever used. The efficacy of its results, and the ease of its application, combined with its cheapness, renders it a fertilizing agent indispensable to all agriculturists. Its effects are equally good for every description of cultivation. Your kindness in making this known will oblige
ROBERT FIELDS.

Providence, Oct., 1856.

REMARKS.—The potatoes cooked were good. We know nothing, personally, of the fertilizer.

HOG MANURE.

Formerly, if I had a good warm pen, with the floor perforated, to drain off the liquid, and kept the solid part well scraped out and thrown into a snug pile on the ground, (perhaps under the eaves,) ready to be removed in the spring, I thought I was doing the thing up in good style; but since I commenced reading the *Farmer*, I use a tight floor, and for the want of a better absorbent, keep it littered with straw, and as fast as it becomes wet, shovel it into another apartment of the pen, intending to use it for corn in the hill if that is advisable, but I fear it will be rather coarse: Now how will it work to compost it with lime? If you will give me a little advice in this matter, I shall be much obliged.
H. BRIGGS.

Fairhaven, Vt.

REMARKS.—A floor, with holes and cracks in it, where swine are kept, entails asthmas, rheumatisms, colds, coughs and catarrhs, and a whole catalogue of evils, upon the unoffending animals. The bedding, of course, is soon wet, and then the wind comes up through it, and the pig is not only wet, but always exposed to a draught of cold air. No pig will thrive under such circumstances so as to afford a profit to the owner. If the sleeping apartment is in the barn cellar, where the wind is excluded, that will alter the case.

Now, friend Briggs, it seems to us that if you cut the litter before using it, you will obviate all objections. It is urged that the time cannot be spared for this. We have found by experience that it re-

quires less time to cut corn stalks and the orts that cattle leave, than it does to overhaul them in the manure heap, and to get them plowed under in the field. A man will load about as much again manure in a day where he can cut down into it with a shovel, as he can pull and twitch out of a heap made up of corn butts, straw and long hay. When everything is cut, it is so minute that it rots quick, and if to this a little fine meadow mud is added, he finds the heap in the spring a black, unctuous paste, easily plowed under, and in a fit condition to feed the plant.

But if you do not cut the litter, still use the tight floor, litter and clean out often, and throw into a compost heap. In the spring, as soon as the heap is free from frost, overhaul it, throw it up lightly, keeping it wet until a gentle heat is gained, when decomposition will take place and soon fit it for use.

It is a good rule never to use lime with vegetable matter. Quicklime has the effect of disengaging and setting free the ammonia from fermenting manures, and so it would from guano, or any other fertilizer highly charged with ammonia.

HORSE ETHAN ALLEN.

MR. EDITOR:—I noticed in your paper of Oct. 4th., an article headed "An explanation," and signed Z. White. He declares \$20,000 was offered for the horse Ethan Allen, by Mr. Austin, of Orwell, one of the owners of the horse, but there was no one, not interested, ready to purchase, at quite so high a price. By publishing my statement you will oblige one, and I think many, who are much opposed to the gambling and horse racing to which our fairs are tending, and who think it much better to improve the morals of man, than the speed of the horse. As there is but one Mr. Austin residing in Orwell, I suppose the "Explanation" is intended for me. I am not acquainted with Z. White, but he is mistaken when he states that I am a partner in the horse Ethan Allen—I do not at this time, and never did, own any interest in the horse.

Orwell, Oct., 1856.

MR. AUSTIN.

PUMPKINS AND VINES.

There grew on my farm this summer, a pumpkin vine whose whole length was 448 feet; there also grew on the same vine 10 pumpkins,—their weight together was 175 lbs.

Dartmouth, Oct., 1856.

P. C.

SWEET MOUNTAIN PEPPERS.

MR. ALBERT HOWARD, of South Braintree, Mass., has left with us some beautiful peppers of this variety. They are large, of fine shape, and he says are superior for pickling.

EARLY SWEET CORN.

Thanks to "M. K.," of Acutneyville, Vt., for the early sweet corn. We hope to test it next year.

For the New England Farmer.

SHEEP ON SMALL FARMS.

SIR:—I wish to learn through your paper a few facts about the keeping of sheep. They are much neglected, on various accounts, and not without reason—the want of suitably fenced pastures, and the occasional depredations of dogs, are almost insurmountable. I have a well fenced piece of mowing-land, of about six acres. It yields about a ton of English hay per acre, unless on the upper and dryer part, where perhaps it yields less. I have enough else to keep me busily occupied, I think, consistently with economy and profit, and think this would be a good place to keep sheep. I want to know how many sheep I could keep here. The soil is good, and if the sheep would fertilize it well in three or four years, whether it could be mowed to good advantage then, without plowing or breaking up? Please tell me if I could reasonably count upon a good revenue from the lambs, and how much for the wool?

I would like, in conclusion, to know if in your estimation this would be the most profitable use to which I could put this field, considering that I have about thirty acres of tillage beside, in high cultivation, and also the amount of hay the sheep would eat during winter? Very respectfully, Essex.

REMARKS.—The keeping a few sheep, even on many of our small farms, would be an interesting feature in our husbandry, and we have no doubt, if properly understood, might be done with profit. We have had considerable experience with sheep, but it was on a farm where there was a hundred acres of pasturage. The case in question is so dissimilar, and our experience under such circumstances is so limited, that we are quite willing to stand aside, and give place to some of our intelligent correspondents, who have the information which may be of use to "Essex."

The subject is interesting and important, and we trust some one who abounds in facts will speak upon it.

COMPOSTS.

The business of forming composts is one in which we may derive important assistance from chemistry. Every plant is composed of certain constituents derived either directly from the soil, or through the medium of the atmosphere. It has been conclusively shown by experiment, that the best manure that can be applied to the grape-vine, is a compost formed principally of its own foliage. In like manner we find that wheat straw, and the haulm of the potato plant, constitute the best manures for the sustenance of those crops. Analogy also teaches us that the residuum of all vegetables, or that portion of them which remains after decomposition, contains the true *pabulum* of their respective tribes, and that in no way can their growth be more effectually promoted than by their application. This is, indeed, the course nature pursues. In our forests the only aliment the trees receive is furnished by the decay of the annual foliage, with the exception of a certain though unascertained amount of atmospheric food derived through the medium of their leaves, and which is also of vegeta

ble origin. These facts indicate a definite course to be pursued in feeding our crops. All vegetable matters are replete with the principles of reproduction, and should consequently be economised and turned to profitable account. Our lands are in want of all the fructifying substances we can procure, and this is one of the most prolific sources to which we can hopefully apply.—*Germanstown Telegraph*.

For the New England Farmer.

FARMERS' SHOWS.

On looking over the awards made at some of our county exhibitions the present season, I find \$30, \$25 and \$20 awarded to young ladies who made the best appearance on horseback, in the field; and \$10, \$8 and \$5 to those who presented the best products of the dairy, prepared by their own hands. The query arose whether those gentlemen who thus ordered these premiums, had not suffered their fancy to run away with their judgment. No one will hesitate to admit that it is an elegant accomplishment for a young lady to be able to ride handsomely on horseback, at a proper time, and in proper places; but will any one presume to say that the funds of our agricultural societies were accumulated to reward such feats of equestrianism? Reference is here made to the late show at Bridgewater; which, if we do not mistake, is not the first time that the attention of the sturdy farmers of that section has been diverted from their proper business, by the display made by ladies. Diversions of like character have occurred in the western part of the State. If they should become general, some further provision for the encouragement of the laborer will need to be made by the Legislature.

October 12th, 1856.

HORSES.

Those who have the care of horses are frequently very negligent in the manner of discharging their duty. There is no animal in existence so susceptible to the effects of dirt, impure air, bad bedding, &c., as the horse. All excrements in the horse's stable, however small in quantity, should be removed at least once a day, and a clean, dry place left the animal to stand or lie down on. Many a horse when stabled for an hour's feeding, is placed in a close filthy place without a breath of pure air—there obliged to make his meal. We would almost as soon think of eating in such a place ourselves, as of compelling the horse to do it. If you have no windows in your stable, by all means make one at once, or knock off a board to let in light and pure air. When you have removed the droppings from the stable at night, strew the floor with dry straw or rusk; the value of the manure will more than pay the expense—besides rendering your horse healthier.

Horses take cold very easily; for this reason they should never be turned from a warm stall where they have perspired for an hour, directly into a damp pasture. Neither should a horse ever be left to lie down over night in a damp pasture where there is no shelter, but let a shed be built, to which they can retire at night. A horse will never lie down in an open lot when he can find a place of shelter; and if there is nothing better, they will always get near a fence or tree, at night.—*Weekly Visitor*.

COL. NEEDHAM'S ADDRESS.

At the late Fair of the Windsor County Agricultural Society, at Woodstock, Vt., Col. NEEDHAM, recently of Groton, in this State, delivered the address, and it consisted in part of a discussion of the influence of the "reciprocity bill" upon agricultural labor in New England.

It will be remembered that the Legislature of Vermont took action in opposition to the "bill," and that Senator Foote, of Vermont, was the only New England Senator, who voted against the ratification of the "treaty" in secret session.

Col. Needham argued that labor in the Canadas costs but little more than one-third of what it does in New England; that the land of the Canadas is much more productive than the soil of New England; and that the admission of wheat, rye, barley and other staples of New England, the Middle States, and the West, to our markets, from the Canadas, free of duty, would be prejudicial to our farmers; and that by bringing the price of ignorant, foreign labor into direct competition with our own, an open attack had been made by the government upon the free labor of the North and West.

Senator Pearce attacked the bill when it was before the Senate, in a speech of great ability, in which he used the following language:

"I think it is a very important measure, a departure from the general revenue policy of the country, involving in it consequences, direct and remote, a probable and a serious injury to one of the greatest interests of the country—an interest as little or less protected than any other, and quite as much entitled to the benefit of direct or incidental protection as any.

"The bill proposes to allow the importation into the United States from Canada, free of duty, of wheat and breadstuffs generally, and other products of that colony, upon condition that similar articles, the product of the United States, may be imported into Canada free of duty. Now, sir, there is no reciprocity in all this; the bill is delusive. If it pass, not a dollar's worth of all these products will be exported from the United States to the Canadas."

But, on the contrary, as Col. Needham argued, the amount of grain to be poured in upon our markets from the Canadas, to depress agricultural labor in New England and the West, will annually exceed the amount of our exports.

HONOLULU, HAWAIIAN ISLANDS.—We have received the "*Pacific Commercial Advertiser*," published at Honolulu, July 17, 1856, and in looking over its columns we find how it happens that the Honolulu people send to us for nearly fifty copies of the *New England Farmer*. They are enthusiastic in the great art, and probably seek information everywhere, so that forty odd of these island-

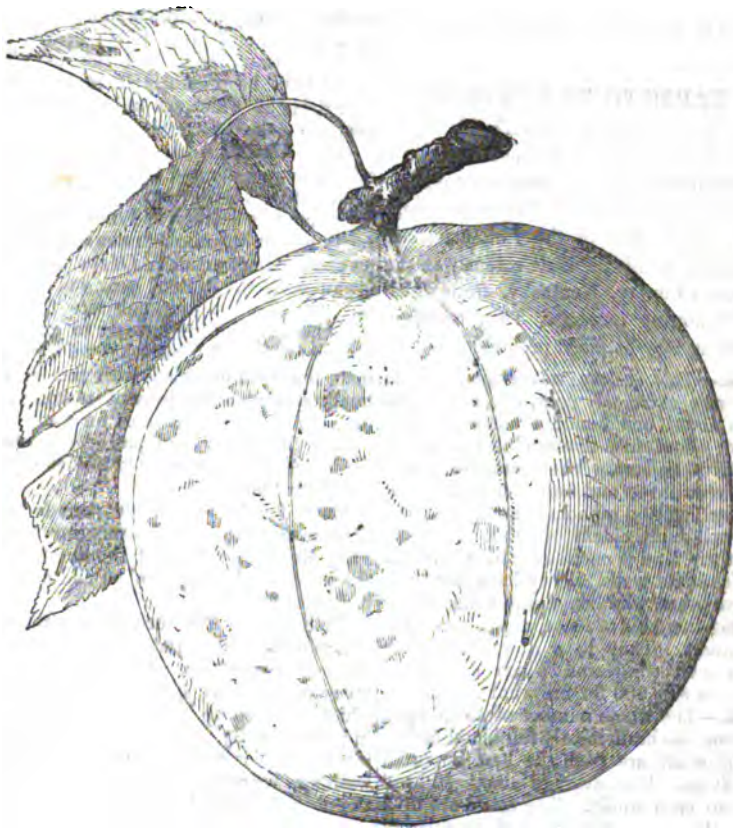
ers have found their way to our books. At the date of this paper they were anticipating "A Fair," and the following is one of the calls to the people:

Let all then who desire this society to flourish, and to increase in usefulness, rally at once, and contribute to render the coming exhibition one that will be both creditable and encouraging.

Give us of the produce of your fields, and of your brains. The fruits of your farms to grace our

tables, and the fruits of your experience to grace our reports. Let this exhibition be but a fair display of what these islands really can produce, and not only the stranger but the resident will be delighted and surprised.

The native society holds its first exhibition on the same day with the other association. Let us wake up *now*, or we shall be handsomely beaten, and not only rub our eyes open in time to see ourselves distanced by our infant competitor.



THE FALL PIPPIN APPLE.

REINETTE BLANCHE D'ESPAGNE. Thomp. Nois.

White Spanish Reinette.	} <i>P.m. Mag. Lind.</i>
D'Espagne.	
Fall Pippin.	
Large Fall Pippin.	
Cobbett's Fall Pippin.	} <i>Of some English gardens.</i>

A very celebrated old Spanish variety, which is said to be the national apple of Spain, where it is called *Cameusar*. Notwithstanding that Thompson and other English authorities consider this apple the same as our Fall Pippin, we are yet strongly of opinion that it is different. The true Fall Pippin is only an autumn variety, while this is a winter sort, keeping till mid-winter here, and in

England till March. It is quite probable that the White Spanish Reinette is the parent of both the Fall and Holland Pippins. The fruit of the present variety is rather more oblong than that of the Fall Pippin.

Fruit very large, roundish-oblong, somewhat angular, with broad ribs on its sides, terminating in an uneven crown, where it is nearly as broad as at the base. Calyx large, open, very deeply sunk in a broad-angled, oblique, irregular basin. Stalk half an inch long, set in a rather small even cavity. Skin smooth, yellowish-green on the shaded side, orange, tinged with brownish-red next the sun,

and sprinkled with blackish dots. Flesh yellowish-white, crisp, tender, with a sugary juice. Noisette (*Jardin Fruitier*) adds, "the skin is covered with a bloom, like that on a plum, which distinguishes this variety from all those most resembling it." The tree has the same wood, foliage, and vigorous habit, as our Fall Pippin, and the fruit keeps from November to February, or March.

REMARKS.—The apple from which the beautiful engraving above was made, is from a tree making one of twenty-five varieties, which we set near our dwelling in the autumn of 1848. All the trees have fruited, several of them have borne abundantly, and promise to repay us amply for our care. The description of the Fall Pippin we take from Downing.

SHAKER FARMING IN KENTUCKY.

The prosperity and thrift which mark this singular sect, whether located in New England or the West, is of that quiet, unostentatious and comfortable character which is pleasant both to witness and to read about. The editor of the *Valley Farmer* gives an account of a visit he made recently to the Society in Mercer County, Kentucky, from which we make the following extracts. They certainly show that farming may be made profitable:—

Their Farm.—This society was established in 1807. They were extremely poor, &c., and began farming upon about one hundred acres of land. They now own about five thousand acres, worth from \$50 to \$100 an acre. There are five "families," and between three and four hundred members. Their dwelling and outhouses are large, commodious and well built, chiefly of brick and stone. The most of their land is enclosed and subdivided with substantial stone walls. They have hired one man for twelve years, who has devoted his whole time to building this kind of fence, aided from time to time by others. They have now about forty miles of this wall completed which cost about \$1,000 a mile, or \$40,000 for the whole.

Their Stock.—The whole number of cattle upon the farm is about 500 head, mostly full blood Short-horns, some of which are from the best imported stock in the State. They average about 40 head of milch cows to each family. The cattle are bred with a view to the improvement of their milking qualities, and in this respect we think that breeders generally in Kentucky pay so little regard that their stock is permanently injured by it. Their system of feeding is of the most economical character, and best calculated to promote the growth and sustain the health of the animals. The hay, oats and straw are stored and cut upon the floor above. Their cutting machines are of the Sinclair pattern, propelled by horse-power, and will cut a ton of feed in a short time. Their cattle are arranged in stalls on each side of the barn, with a passage between. In this passage is a railway upon which is run a large box for mixing and delivering the food, which is wet with water applied by a pump from a cistern immediately under the passage. The meal, which is of corn and rye, ground fine, is stored above, and is let down into the box, through a spout.

They make no calculation on raising grain beyond the wants of the several families and their stock. In 1855 they harvested from 100 acres, 3,100 bushels of wheat, equal to 31 bushels per acre. The crop of the present season is of superior quality, but the yield was but 18 bushels per acre.

Fruit Growing and Preserving constitutes one of the chief sources of revenue to this society. Besides the large amount of apples, peaches, pears and strawberries that are dried and preserved for their own use, they preserve large quantities annually for sale. In 1855, which was a fruitful year, they preserved in sugar 30 tons of different kinds of fruit. The present year, their leading varieties having been cut off, the quantity put up is but about 15 tons, chiefly of strawberries, raspberries, cherries, plums, and plum jelly; nearly half of the whole is strawberries, and the quantity of these would have been greatly increased but for the severe drought which set in just as the fruit was ripening.

Other Matters.—In addition to their annual sales of Durham cattle and preserved fruits, the society manufacture a large number of brooms, which from their superior quality and neatness of finish, find ready sale in our markets at an advanced price upon the ordinary article. Of the number of acres in broom corn the present year we did not inquire, but besides what they cultivate themselves, they hire the neighboring farmers to grow a considerable quantity, and from what we saw, should estimate the land occupied with this crop at several hundred acres; the present season the crop has been considerably cut short for want of rain.

They also grow and put up a large amount of garden seeds which are sold in Kentucky and other Southern States.

Every family raise a few pounds of silk, which they manufacture exclusively for their own use. They also keep a flock of the finest Saxony sheep, the wool of which is combed and manufactured into fabrics for family use.

Their houses are furnished with every convenience calculated to reduce the labor of the various domestic operations. The village is supplied with water from a large spring about half a mile distant, which is forced up into a reservoir and is conveyed in pipes directly to every apartment in the premises where it is needed. Machinery is employed for washing, wringing and smoothing clothes, and in the operations for baking, &c. &c.

A WRINKLE ABOUT THE AGE OF HORSES.—A few days ago we met a gentleman from Alabama, who gave us a piece of information in regard to ascertaining the age of a horse, after he or she has passed the ninth year, which was new to us, and will be, we are sure, to most of our readers. It is this: after the horse is nine years old, a wrinkle comes on the eyelid at the upper corner of the lower lid, and every year thereafter he has one well-defined wrinkle for each year over nine. If, for instance, a horse has three wrinkles, he is twelve; if four, he is thirteen. Add the number of wrinkles to nine, and you will always get it. So says the gentleman; and he is confident it will never fail. As a good many people have horses over nine, it is easily tried. If true, the horse dentist must give up his trade.—*Southern Planter*.

FARMERS! BE ON YOUR GUARD.

The usual season of the Farmer's Festivals has now again, just closed; they have been numerous, and numerously attended, and previously to the present season, there cannot be a doubt but they have had a wholesome influence on all concerned. They have increased the happiness of the husbandman and his family, stimulated him to renewed, and more intelligent efforts in his calling, and gradually led him to a study and research into the principles of the art, to which he had been wholly unaccustomed heretofore.

As a general thing, these Festivals have been uninfluenced by party names or tactics of any sort, having stood entirely upon their own merits, and, like the dews of heaven, shedding their blessings alike upon every industrial pursuit in the community; and this has been done without the slightest invasion of any other interest or avocation.

In connection with the town farmer's club, we can point to communities where the probable increase in agricultural products has been twenty-five per cent. within the last ten years, thus adding a fourth part to the income of a farming town in that short space of time. What more desirable state of things, or what happier influences, could be brought to bear on our rural population, we cannot well imagine. This gain, too, has come in the right way; it has come gradually, from honest and intelligent labor, and is not the offspring of any excitement or speculation that can ever bring recollections of regret.

This happy and prosperous era in rural art and production has been a constant theme of congratulation among all classes for several years past, and until the present season. Now, dark clouds are impending! A new state of things has dawned upon us,—new doctrines and practices are introduced which were once looked on as exceedingly objectionable, and whose unfriendly influence will scarcely admit of a doubt to-day.

Our sober, unpretending gatherings have assumed a "pomp and circumstance," like that of an emblazoned racer, coming upon us with his hot breath and speed of the wind. We are surprised by the suddenness with which our puritan notions have been overwhelmed and the original intentions of our associations swept aside! As

"The Assyrians came down, like a wolf from the fold,
Their cohorts all streaming with silver and gold,"

so the pawing and neighing of steeds, the rush of men to and fro, the ring, the galleries, and the heated manner of the attendants upon our shows, have bewildered our staid people for a time, until the morning dawns in gloom and discontent.

For two years past we have had occasional communications from our correspondents, questioning, or condemning, the introduction of the "trotting

course" in our show grounds. We doubted their propriety from the first, but were willing to wait and watch their influence, before speaking of them in terms of disapprobation. This observation has satisfied us that if the same practices that now exist are continued, if the "track" is to be kept open and horses put to the test upon it, in any way, that the original intentions of the legislature and of the founders of the societies will be utterly subverted; that the entries of neat stock, of implements and machines, of fruits and vegetables and poultry, will gradually decrease, that the men who have heretofore sustained the exhibitions will leave them, and the fair fabric reared at so much cost through many years of labor and discouragement, will become a total wreck.

It is urged that our agricultural festivals cannot be sustained unless "the track" is laid and horses introduced upon it. We do not so think. On the contrary, we question whether the introduction of "the track" has added any permanent pecuniary advantage to any society. In a neighboring county, "the track" cost \$3,000, while the whole receipts were only \$1400, and the premiums on the horses were to be paid from that sum. In this case, too, there was nothing to be seen from the farm, but neat stock and swine.

We are decidedly in favor of the introduction of horses at all our agricultural exhibitions. The horse is the noblest of irrational animals, and while his services are indispensable to us in our business, he greatly contributes to our pleasures. He is, in numberless cases, almost the companion of man, and his attachment and fidelity are so great as sometimes to stagger the belief of the credulous. We hope ever to see him at our gatherings as one of the principal and profitable products of the farm, and that he may sustain there the position which his importance demands—but nothing more.

The *speed*,—which seems to be the principal quality desired on "the track,"—is not a desirable quality on the road, or on the farm; it would be an *absolute objection* in both places, for it would endanger the lives of those that must use them there. A horse that will take two persons in a chaise at the rate of eight or nine miles per hour for two or three hours, or carry them fifty miles handsomely in eight hours, including a stop for feeding, has all the qualities of speed that ought to be expected for the road,—for such a horse might be pressed to twelve miles for a single hour without injury to himself. A "2.40" horse on the farm, would be execrable,—for like the fox-hunter, who at the cry of the hounds would leap the style and run the race, rider or no rider, so would the "fast-nag" remember his paces, and thinking himself on the course, dash the carriage and rider, plow, cart or harrow, to atoms, and perhaps break his own neck or legs in the mad race. But if men insist

upon these paces, we ask them, in all fairness, not to introduce "the track" upon our show grounds, and thus give our exhibitions a new and doubtful character.

Entertaining these views, we have looked with interest to our exchange papers to learn what opinions they have upon the subject, and we find them, with scarcely an exception, agreeing with us. Among those now before us, are the *Country Gentleman*, Albany, the *Amherst Express*, the *Massachusetts Ploughman*, the *Ohio Cultivator*, the *Sicentific American*, *Boston Traveller*, *Evening Transcript*, *Boston*, *New York Tribune*, *Rural New-Yorker*, *Philadelphia Ledger and Transcript*, *New Hampshire Telegraph*, and many others not now at hand. The *Prairie Farmer*, published at Chicago, in speaking of the Wisconsin State Fair, says:—"A gentleman from Walworth County, who took stock there to exhibit, says, farmers have decided to withdraw their countenance and influence from horse-races, and will exhibit no more stock, or any more farm products, at any fair where "jockeyism controls." We know such to be the feeling to some extent in New England. We had hoped that these festivals would be kept free from all "entangling alliances," and especially from those of a political nature, or any that might by the remotest transmutation be considered of an immoral, or even of a doubtful character.

We are, we confess, disappointed. A blight has fallen on our cherished hopes. The tree which we planted and nourished until its fair limbs spread in freshness and beauty over the land, has been grafted by other hands with bitter and repulsive fruit. It is for the farmer to say whether he will continue to cherish it, or purge it of its corruptions, and restore it to its original purity.

HOW AND WHEN TO APPLY GUANO.—The *Mark Lane Express* gives the following rules to be used in the application of Guano, and considers them, from experience, to be useful as a guide to those using the fertilizer:—1st. Guano is best applied in damp or showery weather. 2d. Guano should not generally be put on grass land in the spring later than April. 3d. When Guano is applied to arable land, it should be immediately mixed with the soil, either by harrowing or otherwise. 4th. When the wheat is sown very early in the autumn, a less than usual amount of Guano should at that time be applied, and the rest in the spring. The wheat, otherwise, might become too luxuriant, and be injured by subsequent frosts. 5th. Guano, and artificial manures in general, should be put on the land only in quantities sufficient for the particular crop intended to be grown, and not with the intention of assisting the succeeding one. Each crop should be separately manured. 6th. Guano, before application, should be mixed with at least from five to six times its weight of ashes, charcoal, salt, or fine soil. 7th. Guano should on no account be allowed to come in direct contact with the seed.

AN OPEN POLAR SEA.

An open sea near the pole, or even an open polar basin, has been a topic of theory for a long time, and has been shadowed forth to some extent by actual or supposed discoveries. As far back as the days of Barentz, in 1696, without referring to the earlier and more uncertain chronicles, water was seen to eastward of the northernmost cape of Novaia Zemlia; and, until its limited extent was defined by direct observation, it was assumed to be the sea itself. The Dutch fishermen, above and around Spitzbergen, pushed their adventurous cruises through the ice into open space varying in size and form with the season and the winds; and Dr. Scoresby, a venerated authority, alludes to such vacancies in the floe as pointing in argument to a freedom of movement from the north, inducing open water in the neighborhood of the pole. Baron Wrangell, when forty miles from the coast of Arctic Asia, saw, as he thought, a "vast, illimitable ocean," forgetting for the moment how narrow are the limits of the human vision on a sphere. So, still more recently, Captain Penny proclaimed a sea in Wellington Sound on the very spot where Sir Edward Belcher has since left his frozen ships; and my predecessor, Captain Ingfield, from the mast-head of his little vessel, announced an "open Polar basin" but fifteen miles off from the ice which arrested our progress the next year.

All these illusory discoveries were, no doubt, chronicled with perfect integrity; and it may seem to others, as since I have left the field it sometimes does to myself, that my own, though on a larger scale, may one day pass within the same category. Unlike the others, however, that which I have ventured to call an open sea has been travelled for many miles along its coast, and was viewed from an elevation of five hundred and eighty feet, still without a limit, moved by a heavy swell, free of ice, and dashing in surf against a rock-bound shore.

It is impossible, in reviewing the facts which connect themselves with this discovery—the melted snow upon the rocks, the crowds of marine birds, the limited but still advancing vegetable life, the rise of the thermometer in the water—not to be struck with their bearing on the question of a milder climate near the pole. To refer them all to the modification of temperature induced by the proximity of open water is only to change the form of the question; for it leaves the inquiry unsatisfied, what is the cause of the open water?

This, however, is not the place to enter upon such a discussion. There is no doubt on my mind that at a time within historical and even recent limits, the climate of this region was milder than it is now. I might base this opinion on the fact, abundantly developed by our expedition, of a secular elevation of the coast line; but, independently of the ancient beaches and terraces, and other geological marks, which show that the shore has risen, the stone huts of the natives are found scattered along the line of the bay in spots now so fenced in by ice, as to preclude all possibility of the hunt, and, of course, of habitation by men who rely on it for subsistence.

Tradition points to these as once favorite hunting-grounds near open water. At Resesselar harbor, called by the natives *Anaiok*, or the Thawing, we met with huts in quite tolerable preservation, with the stone pedestals still standing, which used to sustain the carcasses of the captured seals and

walrus. Sunny Gorge, and a large indentation in Dallas Bay, which bears the name of the Inhabited place, showed us the remains of a village, surrounded by the bones of seals, walrus and whales, all now cased in ice. In impressive connection with the same facts, showing not only the former extension of the Esquimaux race to the higher north, but the climatic changes which may, perhaps, be still in progress there, is the sledge-runner, which Mr. Morton saw on the shores of Morris Bay, in latitude 81°. It was made of the bone of a whale, and worked out with skilful labor.

In this recapitulation of facts, I am not entering upon the question of a warmer climate, impressed upon this region in virtue of a physical law, which extends the isotherms toward the pole. Still less am I disposed to express an opinion as to the influence which ocean currents may exert on the temperature of these far northern regions. There is, at least, one man—an officer in the same service with myself, and whose scientific investigations do it honor—with whom I am content to leave that discussion. But I would respectfully suggest to those whose opportunities facilitate the inquiry, whether it may not be that the Gulf Stream, traced already to the coast of Novaia Zemlia, is deflected by that peninsula into the space around the pole. It would require a change in the mean summer temperature of only a few degrees to develop the periodical recurrence of open water. The conditions which define the line of perpetual snow and the limits of the glacier formation, may have, certainly, a proximate application to the problem of such water spaces near the pole.—*Dr. Kane's Arctic Expeditions.*

HORSES TOO WELL FED.

A great proportion of our horses are too well fed—obtain more food than they require. In this land of *plenty* most of our *valuable* horses are over fed, and more especially does this happen, among animals owned by wealthy and liberal individuals. The impression we wish to convey to the mind of the reader is, that the *food* of such, is not proportioned to labor—in other words, there exists a disproportion between the amount of *carbon* taken in the form of food, and the *oxygen* received in the process of *respiration*. Now to illustrate this, we will suppose that a man engaged in mercantile pursuits owns one or more horses, he has not the time, nor inclination to give the one or the other the necessary amount of exercise; they stand up to a *full* crib, from day to day; enjoying—or *rather*, gorging themselves with a certain amount of fodder, over and above what they actually require, and much more than they really need; the surplus is often stored up in the form of fat, and this induces acute diseases, and they die of *too much* food and care. It is very rare that we have occasion to recommend a man to feed his horse more *liberally*, but almost always the reverse. Starvation is said to be the cause for many equine diseases, but so far as our experience goes, such cases are, in this country, very rare. We conceive the term *starvation* to be a libel upon civilization; and so infrequent is its application among a nation of husbandmen, that it is omitted in our dictionaries. A *man* on a barren rock, or a *horse* in the deserts of Arabia, might probably *starve*, but the idea of the latter *starving* in the vicinity of a well-stocked barn, or stable—

within striking distance of a land of plenty—seems to us a very absurd conclusion.

There are enough horses to be found dressed up in the garb of starvation; having tight skin, prominent ribs, and a cadaverous countenance, living, yet half dead. But they know nothing of the "Famine in Egypt;" they get enough, but *too much* of the same kind.—*Dodd's Veterinary Journal.*

For the New England Farmer.

AN OPINION, NOTHING MORE.

MR. EDITOR:—I am confident that too much attention is not given, nor is likely to be, to the rearing of good horses. The wealth of our country is being fast developed, is diffusing itself among the masses, enabling thousands to indulge in rational gratifications, who had before contented themselves with the bare necessities of life. Now it is possible, with very little extra expense, to have races of those animals, such as to gratify a just self-respect. The man who drives a good horse thinks more of himself than if he drove a mean one; and as he thinks, so he really is, a little wiser, somewhat better, more of a man.

Monstrous doctrine! do I hear some one exclaim? Yes, monstrous, because it is new; but it is true, nevertheless. We take the color of our being from the men we associate with, in a large degree. In a smaller degree, we take it from the very animals about us, from the things we are conversant with, from the scenery, from every thing which affects our senses and our imagination. Now, then, think of a horse, thorough bred, sagacious, mild in temper, beautiful in form, in color, in movement; and then think of the man who drives him, feeds him, loves him, admires him, is loved by him, confided in, and obeyed. If he is not somewhat a better man after managing such a horse a few years, than if he had the care and feeding, the training and working of an ugly, contrary scrub, for the same time, he must certainly be a *hard case*, one of those impracticable, unsympathizing, heartless bundles of bone and muscle, which are hardly entitled to be called men.

Any one who has the best elements of humanity in his nature, who is susceptible of meliorating influences, cannot fail to feel a high degree of satisfaction in the management of a good horse, nor fail to receive a kindly influence on his own feelings and character. The people of a State, having a supply of good horses, and indulging a reasonable gratification in the use of such horses, other things being equal, will inevitably become superior to those of another State, where it is more common to be angry with a vicious horse than to be grateful for the services of a kind one, and more common to be ashamed of an ugly one, than to enjoy a rational pleasure in a beautiful one. Viewing the matter as we will, whether in a merely economical light, as that the keeping of a horse that is a horse, is no more than the keeping of a mere scrub, or whether in the higher influences on social and moral character, the importance of the subject is great.

But I have not yet learned that extremely fast horses are good horses. The ability to go a mile in two minutes twenty, is no test of beauty or serviceableness. A horse that can go it, is not the horse that men of taste like to look upon, or that men of sense prefer to use. Such speed is no test

of ability for the real purposes the horse is designed to answer. There are horses so graceful in form and movement, so kind, amiable, faithful, serviceable, that a community can hardly possess them without receiving benefits higher than can be estimated in dollars and cents. But when have fast horses promoted industry, temperance, good taste and good morals? My opinion—it is not offered as worth much—is, that funds raised for the advancement of agriculture should be all expended for other purposes than encouragement of fast horses.

J. A. NASH.

HINTS ON WINTERING BEES.

In response to your request, I will offer a few suggestions on keeping bees during winter, without stopping to give all the reasons for the positions assumed.

To ensure success, the first thing to be attended to is, to see that you begin the winter with none but good stock. It will not do to consider a stock good because it has thrown off swarms, stored surplus honey, &c.; but it is important to know its condition now. This must be learned by close inspection. Turn the hive over on a cool morning, so carefully as not to arouse the bees. Should they chance to be disturbed they may be quieted by tobacco smoke blown among them. The best stocks will show bees between nearly all the combs, unless the number of combs exceeds a dozen. Where they are found only between three or four combs, the most favorable circumstances will be required to get them through the winter. Without superior accommodations such should be taken up, and thus save further trouble and vexation.

The brood combs of old stocks should also be examined, to see that they contain no foul and diseased brood. Such old stocks, when healthy, are just as good as young swarms, and will stand the cold even better.

As soon as the sunny days of autumn are past, so that there is no danger of their being tempted out, the hives intended for winter should be moved to their quarters, unless they already stand in a suitable place.

When but few are kept, it is generally advisable to winter in the open air. Choose a warm place in the sun, yes, in the sun, where it can strike the hive an hour or two each day.

Many people are alarmed at seeing a few bees lying dead upon the snow during winter, and there is a prevalent idea that they get "snow-blind," and fall down to perish. This is an error, for a close examination will show that just as many perish upon the bare ground, only that they are not so readily seen as when on snow. I have frequently taken them out from their winter quarters in the house, when the snow covered the ground, in many places two feet in depth, and yet lost a less number than at many other times when the ground was bare.

A light snow, newly fallen, is somewhat fatal, should the next day or two be still and pleasant to tempt them out. If they settle on such snow, it will not support their weight—they sink below reach of the sun, get chilled and perish. A hard crust or melting snow is "terra firma" to a bee. In case of a light snow, put up a board to shade the hive, and should the air be sufficiently mild for them to leave when thus shaded, it will generally

do to remove the board and allow them to fly—the majority will return. The entrance should be secured against mice, and yet allow sufficient ventilation, a greater amount of which is required than in usually supposed. Small pieces, or strips of wire cloth, partially covering the entrance, are just the things. These should be fastened with carpet tacks in such a manner that the bees may pass, and still the mice not be admitted.

To get rid of the vapor that is continually passing off from the bees, which often moulds the combs and spoils the honey, make half-a-dozen or more inch holes through the top, and cover with an empty box, in such a way as to keep out rain, snow and mice.

When fully ventilated and secured from the mice, they may be covered two feet with snow and no harm will be done. A little snow only around the bottom, is not so well.

Where fifty or more stocks are kept, I would recommend a small, dark, warm room, or dry cellar. A much less number will not be likely to keep the temperature sufficiently high. Very little air admitted is sufficient. To get rid of the moisture, the hives should be turned bottom upward upon shelves, with little blocks under to raise them an inch from the shelf—the holes in the top being left open to allow free circulation of air. By having several tiers of shelves, one above another, a great many may be packed in one room; I have frequently put in two hundred on three tiers of shelves, in a room twelve by eighteen feet. That number will keep such a room above the freezing point at most times. But if the room cannot be kept uniformly warm by the number of stocks, or by other means, I prefer leaving bees out of doors, though housing is preferable with a large number.

—*American Agriculturist.*

HORSES AND CARROTS.

For two months past I have fed my two horses upon carrots and hay. My horses are in constant service on the road; and under this treatment they usually come out at the end of the "pile" looking better than when they commenced. My dose is two quarts, morning, noon, and at night—four to each horse; they have as much good, sweet English hay as they will eat, and cut, whether fed to them dry or otherwise. This latter I have always practised ever since I have had the management of horses; and I am satisfied that it is the cheapest and best way in which it can be given to the horse. There is no waste, and horses eat it better, and have more time to rest, which is quite an important consideration, where the horse is liable to be taken from the stable at any moment. I am satisfied there is no better way of feeding horses, nor is there any cheaper one—that I have ever tried—than the one mentioned. If there is, will not some person who knows please report? I always out them quite fine before using. Carrots are most excellent for horses whose wind is any way affected—such as the heaves, &c. Those who have tried them for this purpose will, I think, agree with me in this; if not, just try the experiment and be satisfied. They are unusually cheap, compared with other articles of food of equal nutritiousness. Last year I paid nine dollars per ton, this year eleven, and at the latter period I prefer them to oats—measure for measure.—*Saturday Evening Post.*

For the New England Farmer.

AUTUMNAL ELEGIAC.

BY THE "PEASANT BARD."

The vane points south. Damp blows the gale
From off towards ocean's misty waste;
Aloft the rainy signals sail,
And on their stormy mission haste.
I stand and hear the roaring blast,
And see the wild rack drifting fast,
And watch on Unadilla's* braes,
Where late the summer sun did smile
The marching mist, and scudding haze
Like spectral rank and file!

There go the hopeful hours of spring;
There summer's more exalted pride,
In autumn glooms evanishing
By mournful Unadilla's side.
And other phantoms, too, I see,
Of perished objects, dear to me,
Once real as the flowers of spring,—
Now all on memory devolves;
While in the blast all hollow sing
The ghosts of good resolves.

O, buried time! O, vain regrets!
Yon vision'd, gloom'd, autumnal strife
Minds me how fast towards Autumn sets
My own bright summer bark of life!
Yea, voyager to the unknown shore,
No anchor holds, that you throw o'er;
Affection's bower, e'en Love's strong sheet,
Cannot the forward tide withstand.
Blest Hope! keep watch; thy cry is sweet:
Land ho! the "better land."

* The name of the stream flowing through the farm of the writer; sacred to mournful memories.
Gull, Mass., Oct. 4, 1856.

CLEANLINESS.

There is a proverb in the Levant that "no Prince ever died of the plague," which means that the many resources which opulence affords are preventives against contagion. Accordingly, we find that in those Mahometan countries, where the plague rages with the greatest violence, but few of those who enjoy the first offices of the State are ever attacked with the distemper, although according to the precepts of Mahomet, they are obliged to appear in public at all times, and must comply with the general custom in giving their hands to be kissed indiscriminately by every Moor who comes to beg justice, or throw himself under their protection.

At a time when the plague at Algiers destroyed many thousands of the populace, who easily caught the infection from their negligence respecting their persons, but two out of three hundred officers, belonging to the Dey's household, were attacked with this mortal sickness.

Nor is cleanliness beneficial only in contagious disorders. Filth engenders corruption, taints the atmosphere, and predisposes the system to disease. And when an epidemic prevails, those persons who are particularly cleanly in their habits, are less likely to become victims to indisposition, than those who pursue an opposite course.

The importance of well ventilated rooms cannot be too strongly urged upon the attendants of the sick. A free circulation of air is not only beneficial to persons laboring under severe attacks of illness, but is absolutely necessary for the preservation of

the health of those who linger by the bedside of a diseased friend. It is said by medical men that there is no kind of malaria more pernicious and fatal in its effects, than the poisonous atmosphere of an unventilated chamber where a person is suffering from a violent attack of an acute disease. Here lies the mystery of the contagiousness of epidemics.

A celebrated English physician, (Dr. Smith on Fever,) says that "the room of a fever patient, in a small and heated apartment, in a populous city, with no circulation of fresh air, is perfectly analogous to a stagnant pool in Ethiopia, full of the bodies of dead locusts. Nature, with her burning sun, her stilled and pent up wind, her stagnant and teeming marsh, manufactures plague on a large and fearful scale; poverty in her hut, covered with rags, surrounded with filth, striving with all her might to keep out the pure air, and to increase the heat, imitates nature but too successfully! the process and the product are the same—the only difference is the magnitude of the result. Penury and ignorance can thus at any time, and in any place, create a moral plague."

THE EAST AND THE WEST.

We have read with much interest an article written by the editor of the *Wisconsin Farmer*, in reply to Gov. Boutwell's address before the Franklin County Society, of this State, in 1855. The object of this address is stated to be to indicate that the West, although a region of great fertility and abundant harvests, is not in every respect superior to the East, and that we have some compensations for the hardness of New England soil, and the rigor of our northern climate. After speaking of the well known fact that the mountain and the seashore have ever been more favorable to an active, vigorous, and free race of men, than the fertile plain, Gov. Boutwell shows from the census statistics of 1850, that the agricultural and manufacturing products of Massachusetts and Vermont were larger, on an average to each person, than were those products of Ohio, Illinois and Wisconsin.

On this point, the remarks of the editor of the *Wisconsin Farmer* are spirited and able. His facts and his arguments are creditable to himself, and honorable to his State.

Our object, however, in this notice, is not to involve ourselves in this controversy between the East and the West. While we rejoice in the rewards which honest industry finds in Wisconsin, we are content with those which Massachusetts affords. We wish simply to call the attention of our friends who are "falling in love with the West" in particular, and new countries in general, to the following extract from the apology which the editor of the *Wisconsin Farmer* offers for the fact that the people of Massachusetts and Vermont produce more than the people of the West. We regard it as a very important concession, coming as it does from one who has "spent over twenty years

on a good farm in Vermont, and about the same time in Wisconsin, and, hence, speaks from his own actual experience." Our observation satisfied us long ago that the actual difference between a "farm" and a "government lot of land" was seldom fully appreciated. We are here told plainly, that *at least one-half of the first five years, and one-fourth of the next ten years*, are employed by the whole population in all new countries in doing that, which in old countries is already done! Hence, the reason why the Wisconsin farmer cannot produce as much as the Vermont farmer, is because he is obliged to be gone three days out of every week from his fields, to attend to the "making up of the country!"

The following is the paragraph alluded to, and we would again urge it upon the attention of all who have any symptoms of the "Western fever."

"After enumerating every item of income in the old States, he (Gov. Boutwell,) simply takes up the same class of items in the new states, without saying *ever* a word about another class of labor, and product, which in every new country must and does engross a large share of the labor and productive industry of the population—to wit: the erection of houses and buildings of all sorts, from the palace to the log-cabin, the pig-pen and hen-coop; the clearing and breaking of lands, and ditching and fencing the same; the planting of orchards, the making of roads and public conveniences of every kind. These all urge themselves, first and foremost, upon the attention of the settler in the new country; and it is not too much to assume, that at least one-half of the time of the whole population, is employed in thus making up the country, as one may say, for the first five years; and at least one-fourth for the next ten years; while in the old States it is notorious that little or nothing of the kind is to be done."

ABOUT CHIPS.

We copy the following article from the *Attica Atlas*. It is prefaced with the remark that an individual chip is diminutive and does not weigh much in the great world's affairs; but chips in the aggregate are numerous, valuable, and every way respectable. Certain it is, that a dry room to which all chips, splinters and fragments of wood can be consigned, might prevent the accumulation of unsightly rubbish about the wood-house and yards, and greatly facilitate the building of fires, and withal save a great deal of valuable material:

"CHIPS.—Yes, I mean veritable chips. 'CHIP, a piece of wood.'—*Webster*. And a very good thing it is, too, if it is dry and on hand when you want it! Chips make a quick fire in the morning; they are better than a 'three minute horse,' in a February freeze, when you are striding about the room at day-break, your hair pointing to all parts of the habitable and uninhabitable aniverse, your bowels collapsed by playing the part of a bellows, and your heart sick from 'hope deferred.'

There is a world of comfort and of value in chips, if you will only save and use them. The modern

fashion of sawing wood makes fewer chips than the old process of chopping; but there will, under all systems, be splinters and fragments of wood that may be usefully employed. Every farm, especially if it has a wood lot, can furnish a great quantity of these.

It will never do to throw them down under the wood-shed. They become damp and mouldy in such positions, and soon get covered with litter and are lost sight of.

No plan of a house is complete without a regular *Chip Room*, accessible, and capacious enough for all purposes connected with chips.

The writer has a 'Chip Room,' a little distance from the house, but we grossly abuse it by filling it full of all imaginable and unimaginable things, besides chips. For want of a better place, a room may be constructed in the upper part of the wood shed. At any rate, it should have a floor above the ground, so as to leave the chips dry.

In the spring of the year, or on a dry day, gather up the pieces, and make your 'deposit.' You can then 'draw' against it in any time of need.

Farmers usually have, in the spring, a large accumulation of chips, which, for want of a place and a proper system, are spoiled, or in the general clearing up, if such a thing should occur, they are burned up with the rubbish or carted off with the 'chip-machine.'

Besides the great convenience of chips, in kindling fires, they are particularly useful in the summer when a blaze is wanted to boil a tea-kettle, and a hot, continuous fire is not desired.

At any rate, the saving of fuel by any and by all means, becomes a necessity, in view of our increasing population, and our diminishing forests.

H. T. R."

For the New England Farmer.

A SHORT PHILIPIC.

MR. EDITOR:—I take it to be as plain as the nose on a man's face—hardly less glaring than the proboscis of one who has swallowed adulterated liquors till his snuffing apparatus has become the largest part of him, and the highest colored—that a horse all thigh and no haunch, more wind than meat, snuffing applause instanter, and scampering unbid, is *not* the horse to look well and do us good and safe service every day in the year. He may win his owner a thousand dollar purse, when a fool can be found to give it, but is worth little for other and more rational purposes. The idea, that a horse's power to scamper like a spirit through applauding crowds, is a test of his real serviceableness, is a humbug, mere fol-de-rol, no truth in it. We want horses to do us service, safe, able, always sure, hand-some always, three hundred sixty-five days in a year, not to win a gambler's purse, on a holiday. These fast horses are anything but what we need. We can break our necks on the railroad, if that becomes desirable, or with a halter, if the public good requires it. We need such savagely fast horses for no good purpose whatever. Why under heaven will sober-minded, right-thinking, honest farmers tolerate the rickety, fidgety, harum-scarum things, at shows got up with their approbation, for their benefit, and partly with their money? Once the fairs were useful. May they become so again.

OLD TIMES.

For the New England Farmer.

HAMPSHIRE CATTLE SHOW.

The seventh anniversary of this society was held in this place, on the 9th and 10th of October, and fully sustained the reputation of this younger member of the fraternity. The show of cattle and horses was unusually good. There were fine specimens of Durhams, Devonshires, Ayrshires, Alderneys and Natives.

There was no trial of speed among horses, but of skill in riding, by female equestrians. This is a novel feature in fairs in this region, and by some is thought very objectionable. If something can be done to induce ladies to take more out-door exercise, on horse-back and on foot, I think it would be well.

The plowing-match was well sustained, fifteen horses contesting for the prizes. The Michigan plow is the plow for me. It does its work "finely and well." There was also a mowing match; several machines were introduced, and their ability tested in cutting rowen. The show of fruit was far better than was anticipated, and proves that this department of agriculture is receiving more attention in this region. It has been much neglected, and we are still far behind Worcester and the eastern counties in this respect. In fine arts there was a very respectable show, but in mechanic arts there was a meager exhibition.

In the matter of oration, there was a failure, as in many other places. Dr. Hitchcock generously stepped in to the gap, and gave us such an entertainment that the loss was not felt, if any loss there was. An excellent dinner was served up by Mr. Lincoln, of the American House, after which a still richer intellectual entertainment was furnished, in speeches by Col. Bullock, of Worcester, Dr. Chaffee, of Springfield, and Prof. Haven, of Amherst College.

During the show, the ladies of Amherst, ever foremost in works of benevolence, got up a fair in aid of Kansas, the net proceeds of which amount to about one hundred and sixty-four dollars.

Amherst, Oct., 1856. Yours, H.

For the New England Farmer.

AN OLD ELM GONE!

MR. EDITOR:—In a late number of the *Monthly Farmer*, under the caption "Barbarism," the writer cites several cases which had justly applied to them that epithet, and hoping that the recital of a few cases—will prevent the repetition of such acts of barbarism, I am induced to give the facts in regard to the sacrifice of another elm, for the sake of a few rods of ground.

This memento of the past—for its infancy must be dated back more than a hundred years—stood just within the highway on the north side of the road, spreading its graceful branches more than half way over the street and a corresponding distance on the opposite side, shading a few rods of a farm.

There it stood, singly, and affording a pleasant retreat amid its spacious top for the birds of the air, and in its cool shade, fowls, beasts and children refreshed themselves from the hot rays of the summer's sun.

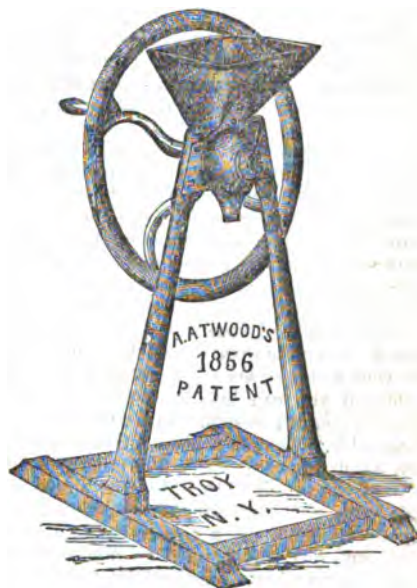
But, alas, it is no more. The stump alone remains, a monument of its former greatness. The

owner of the few rods of ground thought the productiveness of these rods might be increased by the removal of the tree, so a consultation was had with the person, in front of whose residence this tree stood sentinel, and permission obtained to cut it down.

Thus fell in an hour the result of the united efforts of more than a century. There is a vacant spot. So felt one who had grown old in its company, whose majestic form was indelibly engraven on her memory, when she exclaimed, "It seems as if I had lost an old friend." H.

Westfield, 1856.

ATWOOD'S PATENT GLOBE MILLS.



This cut represents a portable hand mill for grinding corn and other grains. This mill will enable every family to make their own corn meal, samp, hominy, wheaten grits, graham flour, &c., always having it fresh and sweet, making it much more wholesome for food. It is well known that grain, (especially corn,) commences losing its sweetness as soon as the hull is broken, therefore the sooner it is used after being ground, the better it is for food.

This mill is slightly varied and used as a coffee mill for stores, where it may be placed on the counter with a drawer under it, and made exceedingly convenient. Where grist mills are few it must be of great convenience, as a sufficient amount of corn, wheat, or buckwheat, may be ground in a few minutes for the daily supply of the family.

They are manufactured of the following sizes, viz:

No. 4, Coffee Mills,	- - - - -	\$8 at retail.
No. 4, Grain Mills,	- - - - -	10 at retail.
No. 5, Grain Mills,	- - - - -	12 at retail.

The mills are manufactured and for sale by ANDERSON ATWOOD, Empire Foundry, Troy, N. Y.

For the New England Farmer.

DEDERICK'S PARALLEL LEVER HAY PRESS.

PATENTED MAY 16, AND JUNE 6, 1866.

Twenty years ago it was said that railroads would almost entirely remove the necessity for horses, but the fact now is, that to-day, there are more horses employed, solely in connection with railroads, than at that time were in the country altogether; and, as these are mostly employed around our depots, and places of transportation in the cities, it follows that the hay for them has to be transported to the cities, and hence, the necessity for a machine to put it into the proper form for safe and convenient transportation.

Hay presses were first made to operate by a screw, worked by a long lever. If the screw was made coarse, so as to make a bale in a short time, then the work of turning it was exceedingly laborious; and if it was made fine, so as to be easily worked, then those operating it had to walk round and round, almost interminably, to make a bale, while they had to walk just as many times back again to lower the follower, preparatory to making another bale. Of course, this could not give any permanent satisfaction; and, consequently, in due course of time, it was supplanted by the application to this purpose of the power and working of the toggle joint. This, as every body may know, is a progressive power, which we may illustrate by saying, that if you bend your knees to an angle of forty-five degrees, the greatest weight you can bear up in your hands is, say 30 pounds; raise yourself a little, and you can hold up 40 pounds; a little more, and you can sustain 60; a little more, 100; and as, raising yourself a little more, you become nearly erect, you can sustain 200 pounds as easily as at first you sustained the 30. The power of the toggle joint, which, scientifically speaking, is a lever operating upon, or in connection with a movable fulcrum, was first applied to pressing hay by the application of one joint and lever; but, as in this plan, the platen or follower was moved by a lever attached only by a point to its centre, it—the follower—would tip now to one side, and again to the other; and therefore its movement was accompanied by a great friction against the sides of the press. The plan was afterwards improved upon, by the application of two points and levers—these levers working to and from each other, like the legs of a pair of compasses. But, as the two levers, like the one, were attached to the centre of the follower, this plan did not remove that tipping, and consequent friction, just spoken of.

Another evil visible in this plan was, that one lever felt the application of the power before the other, so that the strain was always more or less of an uneasy character, and in an undue direction. But now, both and all of these evils are removed, in the above Parallel Lever Press, invented by Mr. DEDERICK, and introduced by Messrs. DEERING & DEDERICK, of Albany, N. Y., in 1854. This press is operated by two parallel toggle joints and levers, so arranged that one lever is near one end, and the other near the other end of the follower; and as the arms of each set of these parallel toggles are exactly of the same length, and connected together at exactly the same distance upon the follower, and at their outward ends, it will be at once apparent that the follower cannot tip or cant to either side,

and, consequently, it moves without any friction against the sides of the press; and, also, by this parallel arrangement of the toggles, both levers, and every part of the follower start simultaneously, which insures the bale coming from the machine square, and of a proper form. The sweep by which the horse turns the capstan is about eight feet in length, the horse going round but five or six times to make a bale; and how easily this is done, may be inferred from the fact, that, by making the sweep two or three feet longer, two men can walk round, pressing the same amount of hay into the same compass, quite easily. When the bale is made, the door, C, and also a similar door on the other side, is then opened, the bale is then bound, and the end is relieved, by releasing the end of the bar, or handle, D, it is taken out from either side at pleasure.

There is also a great improvement made in the doors of these presses, which, contrary to the doors of the old presses, which have to be pounded open with a heavy mallet, or crowbar, these doors can be opened quite easily with one hand.

Another great advantage in connection with these presses is, that they are what a good horse-power press has never been before—namely, an article of merchandise which can be transported to any part of the country as conveniently, and at about the same cost, as a railroad horse-power and thrasher. Hence they are now being forwarded to all parts of the country—full printed directions accompanying each press, for the benefit of those to whom baling hay is a new business. Messrs. *Nourse, Mason & Co.*, of Boston, who are the principal agents for the sale of these presses in New England, say that "in view of the numerous first-class references which can be made to gentlemen using these machines, it can be safely affirmed that this parallel lever hay press is the simplest, most compact, easiest working, most convenient and powerful hay press in the United States." They are made of various numbers, to bale from 100 to 500 pounds, and are sold in Boston at from \$100 to \$190. All other information necessary may be had by personal or letter application to the gentlemen above named.

REMARKS.—An engraving of this Press was recently given in the *Farmer*, reference to which may be had by those particularly interested.

For the New England Farmer.

BOSTON AGRICULTURAL ASSOCIATION.

Notwithstanding the attractive name, we believe this Association has little in it pertaining to agriculture, except the name. When you look into the pens, you find nothing but horses there;—and when you go upon the fields, you find nothing but *speed of movement* there regarded. This is well enough, so long as they use their own means for their purposes, but when they borrow the *frock* of the farmer as a cloak to cover the *tricks* of their horses, and thereby mislead the multitude, we think there is reasonable ground of complaint. We like to see such perfect animals as Ethan Allen and Flora Temple, and should like occasionally to see them driven at their best speed, whether it be 2m. 25s., or 2m. 33s. per mile, provided it be fairly done, and

no gouging—but we do not like to be gulled by a pretended trial of their speed, when those that direct it know as well before they start, as they do afterwards, which will come out ahead. We have heard with our own ears, directions given to the riders, just before they start, “be careful, and mind what I told you.” Now the question is, what was the instruction? Was it not such instruction as would save the bet of the director? If it was, and given for this purpose, then the whole movement is a gambling trick, and those who engage in it are no better than *genteel gamblers*.

COLIC IN HORSES.

The following article is from the *American Veterinary Journal*, edited by GEORGE H. DADD, M. D., Boston. If carefully read and remembered by our readers who own horses, it may be the means of saving some valuable animals. In another article we will give the “Cause of Colic,” from the same work.

The term *colic* is used to designate a disease of very frequent occurrence, both among horses and their masters; those of my audience who have ever been the subjects of an attack of this character, and have experienced the excruciating torment attending it, can readily sympathize with a poor horse when in a similar condition. There is no disease with which I am acquainted that is so sudden in its attack, nor for the time being so distressingly painful, as colic. It is sometimes accompanied with delirium, so that the unfortunate creature will, in falling, or while on the floor, mutilate his own body with reckless ferocity, as if striving to find relief in his own destruction; and occasionally he does succeed in hastening death, either by rupture of the diaphragm or intestines, or inflammation of the latter.

Nature of the Disease.—There are two forms of colic to which horses are subject, one is termed *spasmodic*, the other *flatulent*. The first form is recognized by horsemen as *spasms*, *gripes*, *cramps*, and *stoppage*. The term *stoppage* has been applied, from the fact, that in some cases the patient passes neither feces, flatus, nor urine, and thus the stablemen infer, and the inference, in some cases, is probably correct; that the bowels, as well as other parts, are spasmodically contracted, or else *intussusception* (a folding of one part of the bowel into another,) has taken place; although the latter feature is often associated with flatulency.

It is only necessary to know something of the anatomical structure of the intestines, to perceive how and by what means the spasmodic action takes place. The intestinal tube of the horse, which is about ninety feet in length, is composed of external, internal and central coats. The central coat, or rather layer, is composed of muscular fibres of two orders; one set are circular, the other longitudinal; should contraction occur in the longitudinal fibres, the bowel is proportionately shortened; when it occurs in the circular fibres, the calibre of the intestine is decreased, and sometimes in tonic spasm, complete stricture of the part takes place, so that it is almost impossible to pass even a small probe through the intestinal stricture. On examining horses that die in this state, the small intestines have a knotted appearance, from which fea-

ture some persons have compounded the term “gut-tie.”

Flatulent Colic, which is by far the most common affection, differs so essentially from the preceding that the one can easily be distinguished from the other; in the latter affection flatus, or “wind,” is always present, and if at the early stage no perceptible abdominal distension occurs, it very soon shows itself. One way of satisfying ourselves of the presence of flatus is, to apply the ear to the abdominal region; within, a sort of active rumbling is heard, often accompanied by a tinkling or metallic sound. But while examining the case, we may perhaps perceive that the horse passes flatus by the anus, or eructates it from the mouth; in either case our doubts, if we have any, are immediately set at rest; this feature, accompanied by others which I shall allude to, complete the chain of evidence.

In some cases the gas goes on accumulating in the large intestines until the abdomen resembles that of an ox, said to be “*hoven*” or “*blasted*,” this is a state called *tympanites*, (windy distension.) When the gas generates very suddenly, and the abdomen immediately acquires immense volume, the case is termed *meteorization*.*

It is very distressing to witness the sufferings of an animal in this condition; and the only chance in relieving him is by puncturing the colon, and unless this operation be performed early, it will prove fruitless.

Symptoms of Colic.—It may be well to bear in mind that whatever form of colic occurs, it is always sudden in its attack; and horses are liable to it at all times; in the stable, on the road, or at grass. In the early stage very little occurs to attract attention. The animal, all at once, becomes uneasy from pain, and commences to paw with his forefeet; soon gets down, and if he be in space sufficient, will commence to roll from side to side, often remaining for a few moments on his back, in which posture he seems to obtain temporary relief; sometimes, as quick as thought, he is on his legs again: gives his body a shake, anxiously regards the flanks by turning his head in that direction; when down, again, he goes to perform the same rolling feat. Now and then the patient remains quiet, in a crouching attitude; the limbs being gathered under the body until the distension is so great, or the pains so severe, that he must shift his position, when again we find him rolling, or else standing with the hind extremities stretched backwards,† the fore advanced; thus representing the attitude of a horse when urinating. Supposing at this period that there be no flatulency present, yet the respirations are hurried, the pulse wirey, the eyes glassy, and the patient excessively nervous and uncontrollable; the case is then of a spasmodic character.

Should the animal pass flatus, or the abdomen increase in volume, the case is one of flatulency. Then again, in spasmodic colic, the patient has periods of ease, which gradually grow shorter, until

* *Meteorisation*—a windy state of the abdomen, which takes place suddenly and unexpectedly, as doth the appearance of a meteor in the Heavens.—*Percival*.

† When a horse assumes this attitude, people are apt to conclude that the subject is laboring under suppression of urine, and then down goes the nitre, gin and rosin. But the fact is, he puts himself in this position for the purpose of pressing on the abdomen, and thus giving it support by means of the rectus muscles.

he either gets relief or becomes delirious, and soon dies. Either form of the disease may, however, terminate in inflammation of the bowels. The bladder often becomes sympathetically affected, and retentions of urine is the result; this can be ascertained by introducing the hand into the *rectum*. These are some of the principal features of the colic.

HEAT AND COLD.

Cold is supposed to be a negative property—the absence of heat—and the terms heat and cold are only relative, as compared with the sensations of animal heat; yet cold has some singular effects upon vegetable matter and fluid compounds.—The peculiar properties of wines and vinegar are destroyed by freezing, as are many other articles. Many of the seeds of fruit and forest trees, will not vegetate until they have undergone the action of frost, while the seeds of the locust and a variety of others, will not grow the first year they are planted, notwithstanding they are exposed to cold, unless they are scalded. All of these peculiarities may be owing to some mechanical effect, rather than to any radical change on the chemical decomposition or composition of its constituents. Many vegetables may be entirely frozen, and if the temperature is raised slowly under water, or even in an air-tight vessel, no change can be discovered. A singular change takes place in freezing the pumpkin. The saccharine principle is so developed, that the concentrated juice is a very fair molasses, and as such, was extensively used during the revolution. The effect of both heat and cold upon the potato is altogether the most singular, and we began this article to mention this fact.

The potato contains a great deal of body—of positive animal nutriment, composed, like the breadstuffs, of farina, starch and gluten, and a large portion of water. A potato, if frozen, and instantly put into cold water does, not recover, but is totally changed, and becomes a flaccid sack of unsavory, gummy matter, of a very disagreeable odor, its original properties entirely changed and lost; but if while in the frozen state they are thrown one by one into water constantly boiling, they are in no way affected, and are as edible as when first taken from the earth. This is an anomaly in the action of cold, which may also be true when applied to other vegetables, of which we are not advised; but it is a fact worth knowing, as it may, on some occasions, meet the necessities of almost any family—especially in those flat countries where cellars are difficult of construction.—*Rural New Yorker*.

For the New England Farmer.

CRANBERRIES CULTIVATED.

I have heretofore spoken of the attention given by Mr. E. Needham, of West Danvers, to the cultivation of the cranberry on upland. I learn from him that he has gathered the present season, *one hundred bushels* from less than one hundred and *twenty rods* of land, of fruit of superior quality.—When I take into view the comparative value of the cultivated cranberry with that of natural growth, and the general failure of this crop the present season, I think no one can hesitate in saying, that Mr. Needham's experiment is worthy the highest commendation. P.

MURIATE OF LIME.

This is a fertilizer manufactured by Mr. JAMES GOULD, of Boston, and one which we have spoken of before. Our attention is now called to it by noticing in a pamphlet, an analysis of Dr. CHARLES T. JACKSON, the State Assayer, which we give below:—

Boston, Sept. 15, 1856.

JAMES GOULD, ESQ.,—*Dear Sir:*—I have completed the analysis of your fertilizer, called "Muriate of Lime," and have obtained the following results per cent.:

Carbonate of Lime.....	54.00
Chloride of Sodium (Salt).....	14.40
Phosphate of Lime and some Oxide of Iron.....	6.50
Chloride of Calcium (Muriate of Lime).....	2.70
Chloride of Magnesium (Muriate of Magnesia).....	2.40
Ammonia.....	6.41
Organic Matter.....	4.59
Fine Sand.....	8.50
Loss.....	0.50
	100.00

Twenty per cent. of this compound is soluble in water.

It is shown by the above analysis that this fertilizer is a valuable manure, admirably adapted to siliceous soils and to those which have been impoverished by long cropping.

Respectfully, your obedient servant,

CHARLES T. JACKSON, M. D.,
State Assayer, &c. &c.

We have not used it sufficiently to decide whether the good results we have obtained were in consequence of the muriate of lime, or a combination of circumstances; but our own favorable crops, and the high testimonials of others, suggest to us to recommend it to others to try small quantities of it in various ways and test its ability. Several persons who have used it speak highly of its effects on apple trees and grape vines.

THE BOA AND ELEPHANT.

Shortly after emerging from the jungle into the paddy, our liveliest curiosity was aroused by the eccentric movements of our elephant, and the sudden excitement of his *mahout*, who, leaning over the head of his beast, explored the ground before him, and on each side, with curious, anxious scrutiny, conversing all the while with his huge philosopher and friend, in quick, sharp ejaculations, sometimes shrill, sometimes subdued, sometimes almost whispered in his ear.

"Old Injin-Rubber" crept forward cautiously, (imagine an elephant on tiptoe,) hesitating, suspicious, vigilant, defensive, holding his precious proboscis high in air. Presently he stops short, stares straight before him with evident agitation, for we feel the mass vibrating beneath us, as when a heavily laden wagon crosses a suspension bridge.—Then, hark! with trumpet pointed to the sky, he blows a sharp and brazen blast, and trots forward. At the same moment, an exultant exclamation from the *mahout* tells the story in a word—"the boa! the boa!"

Right in the path, where the sun was hottest, lay a serpent, such as he who charmed the first vanity, his vast length of splendid ugliness gorged, torpid,

motionless, not coiled up, nor vermicular, but outstretched, prostrate and limp—subject, abject to the great gluttony of his instinct.

"Old Injin-Rubber" pauses, as if for instructions; he receives them on his organ of philoprogenitiveness from the boat-hook. Half a dozen more rolls and lurches, and he plants his mountainous forefoot on the head of the drunken horror—eyes, brains, blood burst out together. Like an earthworm on the pin-hook of an angling urchin, he wriggles and squirms—now twisting his great girth into seemingly everlasting knots—now erecting all his length, without a kink, in air—now, in a tempest of dust, thrashing the ground with resounding stripes; till, at last, his crushing strength all spent, even his tail subdued, he lies and only shivers. Then, again and again, Behemoth tosses him aloft, again and again dashes him to earth; till, torn and spoiled, his gold and black all tarnished with slime, and blood, and dust, the enemy is brought to shame, and the heel of a babe might bruise the head of the serpent.—*The Golden Dagon.*

For the New England Farmer.

RELATION OF AGRICULTURE TO HEALTH.

MR. EDITOR:—It is unquestionably admitted that life in man cannot be sustained without air, and also, that by breathing, most of the diseases of mankind are acquired; proving that through the medium of air, man is, or is not healthy, according as that air is or is not in a state conducive to health. New countries are not healthy, nor are unimproved lands; and that place that produces the greatest return for labor expended cannot be healthy.

The first relation of agriculture to health will be obvious on exposition, that life cannot be prolonged without oxygen, while that oxygen is produced by the exhalation of plants; plants, at the same time, inspire and derive their nourishment from carbonic acids, which, in a soil that vegetates vigorously, and in the air that surrounds that soil, is found abundantly; and when it superabounds it causes maladies; then imperatively demanding for continuance of life more thorough and extensive cultivation, and better disposal of that, which decomposing, causes renewed quantities to circulate in the air. If the impure air of our cities, and of all places where our olfactory nerves would declare that there was carbonic acid, could be removed and placed upon plants deprived of their supply, Doctors of Medicine would flee from a country made healthy, not by them, but by the farmer. How few estimate the value of Boston Common to Boston.

Thus it will be seen that an unhealthy country contains in the air the fertilizing elements for extensive vegetation, the removal of which, by plants, and the renewal of oxygen, will give to the air the principles of health. But as this vegetable culture improves the air, it becomes in consequence less able to assist the growth of plants, and a previously productive country now positively needs manure to generate the acid that heretofore was supplied simply by the atmosphere.

These observations indicate the relation of the farmer to his country. He is a benefactor, he holds the blessings of life in his sinewy hands; taking that which would destroy us, he, in return, offers us pure air, free, and wholesome food at convenient prices.

E. J. W.

SUPERIORITY OF OUR AGE.

Our age is boastful of its advances beyond all which have preceded it. It claims a vast superiority, at least in the conveniences and arts of social life, and has small respect for the rude implements and barbarian manners of our great grandfathers. The *Saturday Evening Post* is skeptical as to the face of progress, and from a long article in which it sets forth the grounds of its unbelief, we select the following paragraph, which may startle some of our readers:

Let us say a word about Mechanics. Everybody knows, or ought to know, that the ancients had telescopes, astrolabes, quadrants, burning and magnifying glasses, the lever, the screw, and the implements of Science, Art, War, Agriculture, Manufactures, etc., in great number and perfection. Without them they could not have accomplished their known results; and one-tenth part of what they had or accomplished is not known to us. Time makes sad havoc of the monuments of man's skill. But now; there is the little city of Karnac in Egypt—there are two Karnacs—the great and the little;—in little Karnac you could put Philadelphia and New York and have room to spare! The walls and structures are colossal, and we argue safely that their builders had both mechanical skill and sufficient enginery to build them. There is Pompey's pillar, fallen in the desert. The French and English engineers, with all their best appliances, labored seven days to move the enormous shaft; they moved it about an inch! Yet that shaft had been quarried from the rock at a distance of seven hundred miles, conveyed from thence, and erected in the desert! It was hewn from the quarry of porphyry; it is sculptured all over with deep hieroglyphics; and yet, as we have said, our best instruments can hardly make a scratch on porphyry, and having made it, are blunted and useless! Our best hydraulic works are said by competent judges to be inferior to the Chinese canals; our best fortifications are pigmy to the Chinese walls. We have no Artesian wells so deep as the Chinese. In China the traveller meets with borings three thousand feet deep, made to get coal gas from the interior of the earth. Printing, of a certain clumsy fashion, the Chinese have had for centuries: it is highly probable other nations had it too in greater perfection, though as the philosophy of those ages was hostile to the diffusion of knowledge, it was probably the secret of the aristocracy or the priests. The relics of railroads are still seen in India, but of gigantic size, capable of bearing an entire temple. How do we know they had not steam, or some propulsive force equal thereto? It is hardly safe to assume of such people that they had not everything they needed, if within the scope of human wit. Herodotus mentions having seen at Demi, an enormous globe of vivid light surmounting a tall column, which lit the entire city. That beats our gas-lamps all to nothing! We have lately seen statements purporting to come from (we think,) Col. Maitland, of the East India Company, narrating as a fact that the natives in that country have some mysterious method of communication by which they are enabled to transmit news from one part of the country to another, faster than a courier can convey it at his utmost speed. If this is true, (and really one is prepared to believe anything of the Hindus!) there is an odor about it very like the magnetic telegraph.

For the New England Farmer.

THOROUGH DRAINING.

BY HENRY P. FRENCH.

Heat will not pass downward in water. If therefore your soil be saturated with water, the heat of the sun in spring cannot warm it, and your plowing and planting must be late, and your crop a failure.

Count Rumford tried many experiments to illustrate the mode of the propagation of heat in fluids, and his conclusion, I presume, is now held to be the true theory, that heat is transmitted in water only by the *motion* of the particles of water, so that if you could stop the heated particles from rising, water could not be warmed except where it touches the vessel containing it. Heat applied to the bottom of a vessel of water, warms the particles of water in contact with the vessel, and they rise and colder particles descend, and so the whole is warmed.

Heat applied to the surface of the water can never warm it, except so far as the heat is conducted downwards by the vessel containing it.

Count Rumford confined cakes of ice in the bottom of glass jars, and covering the ice with one thickness of paper, poured boiling hot water on top of it, and there it remained for hours without melting the ice. The paper was placed over the ice so that the hot water would not be poured on to it, which would thaw it at once. Every man who has poured hot water into a frozen pump, hoping to thaw out the ice by the means, has arrived at the fact, if not at the theory, that ice will not melt by hot water on top of it. If, however, a piece of lead pipe be placed in the pump, resting on the ice, and hot water be poured through it, the ice will melt at once. In the first instance, the hot water in contact with the ice, becomes cold, and there it remains, because cold water is heavier than warm, and there it will remain, though the top be boiling. But when hot water is poured through the pipe, the downward current drives away the cold water, and brings heated particles in succession on to the ice.

Heat is propagated in water, then, only by circulation, that is, by the upward movement of the heated particles, and the downward movement of the colder particles, to take their place.

Anything that obstructs circulation, prevents the passage of heat. Chocolate retains heat longer than tea, because it is thicker, and the hot particles cannot so readily rise to be cooled at the surface. Count Rumford illustrated this fact satisfactorily, by putting eider-down into water which was found to obstruct the circulation, and to prevent the rapid heating or cooling of it. The same is true of all viscous substances, as starch, glue, and so of oil. They retain heat much longer than water or spirits.

The November number of the *Horticulturist* has an article, with a cut explaining this subject, and applying the above theory to wet land. The experiment was made with a box of peat saturated with water, and it is satisfactorily proved that it is not possible to warm the earth at the bottom, by putting boiling water on the surface, so long as no water is drawn out at the bottom.

As soon, however, as water was drawn out at the bottom, the hot water passed down, and the earth at the bottom was warmed.

"In this experiment, the wooden box may be supposed to be the field; the peat and cold water represent the water-logged portion; rain falls on the surface and becomes warmed by contact with the soil, and thus heated descends. But it is stopped by the cold water, and the heat will go no further. But if the soil is drained, and not water-logged, the warm rain trickles through the crevices of the earth, carrying to the drain level the high temperature it had gained on the surface, parts with it to the soil as it passes down, and thus produces that bottom heat which is so essential to plants."

Thus is shown one of the advantages of draining land. Many others might be named, did time and space allow. Since my article on Draining with Tiles was written, I have completed my work and plowed the drained land. The water disappeared from between the drains, as fast as they were opened. The low wet places where rushes had started up, and where the surface without the drains would have been covered several inches deep, became dry, through the whole space of fifty feet, between the drains. A springy side-hill, which we could not plant till the 6th of June, because it was so wet, and where my potatoes needed life-preservers in dog days, is as dry and friable as an old market garden. The 100 rods of tile drains which are laid in this field empty at one opening, and although the field has so dry and innocent a look, we find a large flow of water at all times, and after a short storm, a stream that nearly fills a three-inch tile.

B. F. Nourse, of Orrington, Maine, has been kind enough to send me a report of a Committee of the Bangor Horticultural Society, showing his operations in draining. Mr. Nourse writes me that he has this season extended his work, having now about 3½ miles of drains laid, two miles of which is with tiles from Albany.

I cannot make a better contribution to the cause than by giving extracts from that report.

"At the time of our visit in early summer, there was but one expression of satisfaction, not only from each individual member of the Committee, but from all the invited guests, at the appearance of the farm, the buildings, fences and crops. Although the season had been wet, yet the land was dry; the grass, grain, corn and trees were making a vigorous growth, being clothed with a richness of verdure which gave promise of abundant harvest. They all bore testimony to a careful, intelligent, sci-

entific culture. Comparing this land with certain other portions of similar character in the vicinity which had not received the same treatment, the contrast was very perceptible. The one was light, porous, arable and free from water; the other hard, lumpy, cohesive or miry. The one had been drained, the other drowned.

The whole farm lies upon the northerly inclination of a hill several hundred feet above tide water, and extends to the summit. The super soil is generally clay loam with some gravel; the latter is present in some places in sufficient quantity to constitute gravelly loam. Near the top of the hill, the loam rests directly upon a ledge of rock similar to that which crests the neighboring hills, and this ledge appears at the surface in a few spots of one or two rods extent each. When cleared and plowed, enough loose stones and boulders of granite were exposed on the surface to build the external walls. It might be called a 'rocky' farm. With the exception of two places, each of about two acres, the whole farm was wet and 'springy,' unfit for plowing or any other agricultural process until quite late in spring or early summer. Water is found everywhere quite near the surface. The deepest well on the premises, dug in the dry season of 1854, extends down only thirteen feet. The excess of water made it cold and rather discouraging for any crop except grass, and even this was too readily killed by the action of winter frost. The surface soil is underlaid throughout (except immediately on the ledge of rock) by an impervious sub-soil or hard pan of stiff clay, quite retentive of water.

The first draining was done in 1852, on a piece of about 1½ acres, designed for a pear orchard. Thirteen drains 15 rods in length, and 20 feet apart were opened down the hill. The duct or channel was made by placing two flat stones apart on their edges, and letting the upper edges fall together; these were wedged in place filled above with six or eight inches of small cobble and broken stones. Inverted turfs or boughs were then spread upon them, to prevent the washing of earthy particles into the drain, and the earth was returned over all. These drains empty by bending at an acute angle into a main drain which is at right angles with the general course of the former, following a more gentle inclination westward, and laid with flat stones resting upon side stones covered and filled in as the others. This main discharges the water at the road-side which has never ceased flowing from it during the coldest winter weather. The land was then plowed across the drains with six oxen and the largest plow obtainable, opening a furrow twelve inches deep, in which followed a sub-soil plow drawn by four oxen, cutting twelve inches deeper.

Upon this piece of land the frost comes out some days earlier, is later in fall, and of less depth in winter than in contiguous land undrained. The whole is dry enough for spading or plowing as soon as the frost is out in the spring, or within two hours after any heavy rain. During the drought of 1854, there was at all times sufficient dampness apparent on scraping the surface of the ground (with the foot in passing,) and a crop of beans was planted, grown and gathered therefrom, without so much rain as will usually fall in a shower of fifteen minutes duration, while vegetation on the next field, was parching for lack of moisture.

The small drains were laid with sole tile that cost \$24,50 per thousand, delivered at the farm,

(double the cost in Albany, where manufactured,) and the mains with flat stones, resting on side stones, filled in and covered as before described, the earth being returned easily with a two horse-scraper. A field of one acre and two-fifths 'thorough drained' in this way, 40 feet apart, 3½ feet deep, required 105 rods, including main, and cost \$67,50 per acre completed. This field was plowed and sub-soiled each about ten inches deep, and a hoed crop taken off last season. During the heaviest rain no running or standing water could be seen on its surface. When your committee made its visit, we were shown an acre of this field, which had been manured and partly plowed for corn, when a protracted rain came on. The seed being in soak and manure wasting, after the second day's rain, it was resolved to prosecute the planting, and the plowing was finished, the land harrowed, furrowed, dressed in the furrow, and planted in a drizzling rain, working easily and well. The corn all came up, and has grown well; and still we did not see many clods or other appearances of wet weather working. Yet this was a clay loam, formerly as wet as the adjoining grass field, upon which oxen and cart could not pass on the day of this planting without cutting through the turf and 'mirning' deeply. The nearest neighbor, a member of your committee, said 'if he had planted that day it must have been from a raft!'

In 1855, provisions were so high that such labor as ditchers rendered could not be cheapened in cost per rod; but an experiment was tried on a field of three acres by laying tile drains 3½ feet deep, 4 rods apart, leading into a stone main, all of them covered and filled as before. An acre required 45 rods—average cost 90 cents per rod, or \$40,50 per acre. More time is needed with wet and dry seasons to test the efficiency of drains so far apart.

This field was plowed, but not sub-soiled last fall. It was in good working order in three days after the frost was out, two weeks earlier than the adjacent land was ready to plow. If not so thorough in laying the land dry and given it such an open, porous soil as is desirable, its evident benefit at so small a cost per acre makes the experiment worthy of imitation.

Appended are some statistics of the cost, as ascertained, in draining this farm.

MAINS.		Per Rod.
Digging 4 feet deep, 2 feet wide at bottom,	-	44 cts.
Hauling stone for channel,	-	16
Laying same,	-	12
Hauling and picking small stones for filling,	-	12
Sods, boughs or moss,	-	6
Returning earth with scraper,	-	12

\$1,00

SMALL DRAINS.		
Digging 3½ feet deep, 20 inches at bottom,	-	87½ cts.
Hauling stone for channel,	-	12½
Laying same,	-	10
Hauling and picking small stones for filling,	-	12
Sods, boughs or moss,	-	4
Returning earth with scraper,	-	10

86 cts.

TILE—2 INCHES CALIBRE.		
Digging 3½ feet deep, 6 inches at bottom,	-	33 cts.
Tile,	-	33
Laying same,	-	4
Stone fitting,	-	10
Sods, &c.,	-	2
Refilling,	-	6

88 cts.

In conclusion we would represent that the concurrent testimony, of all in this country and Europe, who have tried this system of draining, proves

that the following benefits are obtained: It obviates the bad effects of drought, because the roots of plants and trees can descend more deeply for nutriment and moisture; by removing excess of water, it renders soils earlier in spring, and allows work to be done sooner after rains; it averts the effects of cold weather later in autumn; it prevents the heaving of grass and grain in winter, and the frost from penetrating so deeply; it enables us to deepen the surface soil, it accelerates the disintegration of the mineral matters in the soil, and improves its mechanical condition by promoting the finer comminution of the earthy particles; it hastens the decay of roots and other vegetable matter; it allows the fertilizing gases of the atmosphere and the water from rains to percolate deeply, and be deposited among the absorbent parts of the soil until the necessities of plants require them; it causes a more even distribution of nutritious matters among those parts of soil traversed by roots; by removing stagnant water, it prevents the cooling process of evaporation, and the abstraction of heat; it contributes to the warmth of the lower portions of the soil; it prevents meadows from becoming impoverished; it causes the poisonous excrementitious matter of plants to be carried out of the reach of their roots; it prevents the formation of acetic and other organic acids, which favor the production of sorrel and other noxious weeds, and it makes the surface soil of heavy lands light, and free from incrustation.

From the preceding facts, your Committee are fully of the opinion, that this system of underground draining would be of great public utility, and we cannot too strongly recommend it to every Horticulturist and Agriculturist."

Several of my neighbors have used some of the tiles which I procured from Albany, and although they cost us twice the Albany price, the freight exceeding the first cost, we are satisfied that they are cheaper than stone at the cost of hauling. One thing we have determined on, that we will have the tiles at a cheaper rate, and if nobody offers them at a fair price, some of the members of the Rockingham Fair will establish works and make them for ourselves, before many months. Probably we may have to pay something for an education, as most people do, who engage in new enterprises, but the tiles are to be supplied at a cheaper rate than double the Albany prices.

DR. HARRIS'S CABINET.—The entomological cabinet of the late Dr. Harris, of Cambridge, contains between four and five thousand species of American, besides a collection of foreign insects. It is in perfect preservation, and a Committee of the Natural History Society are endeavoring to raise funds to purchase it, in behalf of that association.

TO CLEAN KNIVES WITH EXPEDITION AND EASE.—Make a strong solution of the common washing soda and water; after wiping them, dip the blades of the knives in the solution, then polish on a knife-board. The same would, of course, be effectual for forks. This simple method will no doubt greatly diminish the dislike which some servants have to this part of domestic work.

PROSPECTS.

In our remarks at the close of the year 1855, we were justified in speaking encouragingly of the future, because new friends had gathered around us, and the labor of both head and hands had been most abundantly sustained. The future we then spoke of, has been one of happiness to ourselves, and of prosperity to the *New England Farmer*. While its list has materially increased, the paper, printing and engraving, have all been improved; indeed, the engraving for the last year has been from original subjects, and has been executed in the highest style of the art. Whatever will tend to improve the *Farmer* in its appearance, or will give it more practical value to the cultivator of the soil, will be given it without regard to present expense. The publisher entertains the most liberal and enlightened views in relation to such a publication as this, has ample means, and will make it in every respect, a true co-worker in the farming interest. His outlays have been met with a degree of confidence and liberality which are regarded as an appreciation of his efforts to meet the public wants.

In closing the year, we wish to acknowledge our indebtedness to the numerous practical, observing, and intelligent contributors to the columns of the *Farmer*, and to those partial friends, who, everywhere, have appreciated our labors, and have always had good word to say for us.

The year has been one of considerable progress in the art. There are evidences of new views wherever we turn, and while the products of the soil have been greatly increased, a *less quantity of land has been under cultivation*, and, we believe, a great, *deal less manual labor has been performed*. This would leave large tracts of land to be used for grazing, or to run to forest, both of which yield their products without the direct agency of man. In this, the gain to New England must be very great.

The industrial habits, also, of the farmer, have been more carefully considered, so that large numbers now give more time than they have heretofore to study and recreation, and find the gratifying result of larger crops, better health, and a more elevated tone of domestic life.

There has been generally abundant crops, so that our garners are full, and no fatal disease has decimated our herds of stock.

The year to those who manage the farm, has been one of great gratification,—for while they have reaped a fair reward for their labors, they have had the pleasure to learn that those labors have been acceptable to a discriminating public, have had a tendency to promote all the arts of peace, and that of agriculture especially, and upon the whole, to do something to make the world better at its close, than it was at the beginning of the year.



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